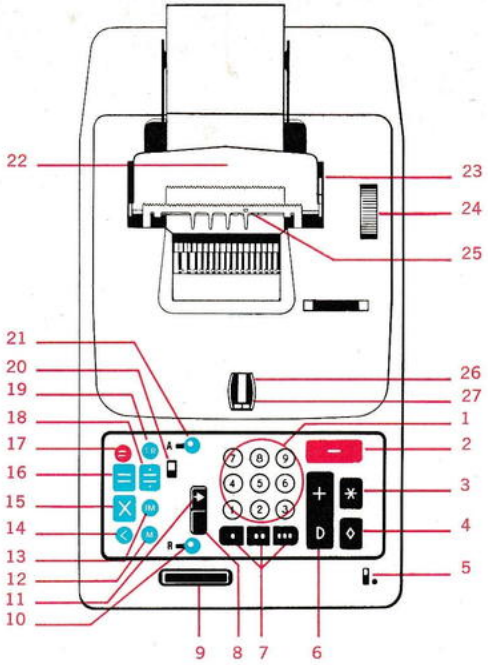

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olivetti

Instructions for the use of the

Divisumma 24

superautomatic printing calculator

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Foreword

The Olivetti Divisumma 24 is a superautomatic printing calculator with one register and a dynamic memory. It is designed to add, subtract, multiply, and divide at high speed, and to calculate negative (or credit) balances.

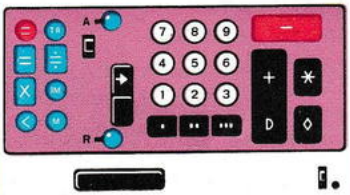
Automatic controls allow any of the four operations to be linked directly to others, in any sequence. In this way a wide variety of chain calculations can be quickly and simply carried out.

For example:

— calculations involving a constant addend or subtrahend;
— positive or negative multiplications involving a constant factor;
— calculations requiring the automatic re-entry of products or totals for further multiplication (volumes, powers, factorials, etc.);
— fully automatic divisions requiring the retention of the quotient for further use.

Each stage and result of a calculation is printed on a tally roll. This, besides providing a permanent record of the calculation, allows accuracy to be checked, on the spot or at a later date and in a different place.

This manual contains, as well as full operating instructions for the machine, additional information for the benefit of the operator, examples of some typical applications of the machine, and a set of tables for values and conversions frequently required in day-by-day calculation.



Entry keys

The Divisumma 24 keyboard contains nine round keys for entering the digits 1 to 9, and three rectangular keys for entering single, double and triple zeros.

Clearing the machine

Before beginning a fresh series of calculations always check that the machine is clear.
To do this, depress key ✱: the symbol T will then be printed, indicating that the machine is clear.

T

Entering an amount

To enter an amount on the keyboard, simply depress the keys which correspond to the digits in the amount in the same order as you would write them (i.e., from left to right). The machine automatically arranges them in their respective columns.

Correcting an entry

If you realise that you have made a mistake in figure entry, you can cancel the entry by depressing the keyboard clearing key ■.

If you wish to correct only the last digit entered, depress the back space key ➡; this key cancels only the last digit. By depressing the back-space key ➡ again, you can cancel the next-to-last-digit entered, and so on.

Capacity of the machine

The entering capacity of the machine is 12 digits: 999,999,999,999. The totalling capacity of the machine is 13 digits: 9,999,999,999,999.

Column indicator

While an amount is being entered, as many dots as there are digits so far entered appear in the window on the front of the top cover. For easier reading these dots are arranged in groups of three, with the appropriate number underneath.

Credit balance signal

At the foot of the column indicator there is a small signal which shows white when there is a negative (or credit) balance in the register of the machine.

The basic operations

ADDITION

Example: $123 + 15 = 138$

123 +
15 +
138 T

Enter the first amount by depressing in order keys ① ② ③, and then depress the addition key ⊞ D (or the bar ▬).
Enter the second amount ① ⑤ and depress the addition key ⊞ D again.
Depress the total key ✱: the result, 138, is printed in red together with symbol T.

SUBTRACTION

Example: $321 - 301 = 20$

321 +
301 –
20 T

Enter the first amount, 321, and depress key ⊞ D.
Enter the second amount, 301, and depress the subtraction key ▬.
Depress key ✱, which causes the difference between the amounts – i.e., 20 – to be printed.

Sub-total (running total)

Example:

$$\begin{array}{r} 25{,}000 \\ + \ 1{,}500 \\ \hline = 26{,}500 \\ - \ 500 \\ + \ 800 \\ \hline = 26{,}800 \end{array}$$

25000 +
1500 +
26500 S

Depress keys ② ⑤ ▪▪ and then key ⊞ D.
Depress keys ① ⑤ ▪▪ and then key ⊞ D.

Depress the sub-total (running total) key ◊: the running total, 26,500, is printed with the symbol S and retained in the register of the machine.
Complete the calculation by subtracting 500 and adding 800, and then – to obtain the final result and to clear the machine for the next calculation – depressing the full total key ✱.

500 –
800 +
26800 T

CREDIT BALANCE

The machine is equipped to find a true negative (or credit) balance, and so to carry out automatically any kind of algebraic calculation.
The credit balance, which is indicated by the credit balance signal already referred to, is designated on the tally roll by the symbol c (credit) printed alongside the T or S symbols.

Example: $50 - 85 = -35$

Enter 50 and depress key ⊞ D.
Enter 85 and depress key ▬.
Depress key ✱: the credit balance, 35, is printed with the symbols c T.

50 +
85 –
35c T

Printing of figures and symbols

- amounts added or subtracted are printed in blue (or black) with the symbols + or –;
- totals and sub-totals, both positive and negative, are printed in red with the appropriate symbols. They are followed by an automatic double line spacing to mark off the end of one calculation from the beginning of the next.

Repeat lever

If an amount has to be added or subtracted more than once in succession, to avoid re-entering it each time « hold » it on the keyboard by using the repeat lever.

When you have entered the amount concerned, move the repeat lever to the left towards the position marked « R ». Add or subtract the amount the required number of times, and then, at the end of the sequence, depress either the total or the sub-total key: the result is then printed, and the repeat lever automatically returned to its « off » position.

Example:

125
+ 250
+ 250
+ 250
Result = 875

125 +
250 +
250 +
250 +
875 T

Enter 125 and depress key +D.

Enter 250, engage the repeat lever, and depress key +D three times.

Depress key ✱: the result, 875, is printed, and the repeat lever automatically returns to its « off » position.

Where the repeat sequence is to be followed by other additions or subtractions, the repeated amount can be cancelled either by depression of the sub-total key or (if it is preferred that the sub-total should not be printed) by depression of the keyboard clearing key ■ and the manual return of the repeat lever to its « off » position.

Static memory

It is important to realise that the Divisumma 24 can « hold » an amount on the keyboard even when a total or sub-total operation is carried out. For this simply hold the repeat lever in the « on » position manually while you depress the total or sub-total key. This feature (the « static memory ») is particularly useful for working out arithmetical progression and other similar calculations.

Printing of amounts without calculation (reference numbers)

To print a reference number, simply enter the number (e.g., 123) on the keyboard and depress the non-add key ⟲: the number is printed on the tally roll, together with the symbol < to indicate that the register of the machine has not been involved in the operation.

123 <

Date key

To print the date automatically, simply:

- depress the date key □, and then;
- depress any of the motor control keys.

The particular date to be printed is selected, at the beginning of each day, by manual positioning of the four date printing wheels situated to the left of the numerical printing wheels.

At the side is shown an addition calculation with the date printed alongside the result. To obtain this, simply carry out the additions and then depress the date key □ before the final depression of the total key ✱.

Obviously this feature can be used to print, instead of the date, other

123 +
456 +
258 +
12.10 837 T

constant reference numbers: the number of the machine operator, the number of the machine itself (where several machines are in use), etc.

DYNAMIC MEMORY

A - Transferring an amount entered on the keyboard into the dynamic memory.

125 × <

Enter an amount (e.g. 125) on the keyboard and depress key X .

The amount, 125, is received in the machine's dynamic memory, automatically cancelling any amount that may have been held there previously.

Of the two symbols printed alongside the amount on the tally roll, the < indicates that the register has not been involved in the operation, and the × that the dynamic memory has been involved.

As any amount received in the register automatically cancels the amount previously held there, the operator has no need to worry about clearing the dynamic memory at any stage. Nevertheless it is worth noting that, if key X is depressed when there is no amount entered on the keyboard the dynamic memory is cleared.

At any point in a calculation the contents of the dynamic memory can be read. To do this depress in order the preselector key M and the non-add key ◁ .

125 × <

The contents of the dynamic memory are then printed in red, as shown at the side.

B - Simultaneous transfer of an amount into the dynamic memory and into the register for addition or subtraction.

123 × +

Enter an amount (e.g., 123), depress the preselector key IM , and then depress the addition or subtraction key according to the operation to be carried out.

For example:

123 × –

- simultaneous transfer into the dynamic memory and into the register (in addition):
  depress first key IM and then key +D;
- simultaneous transfer into the dynamic memory and into the register (in subtraction):
  depress first key IM and then key – .

C - Transferring a total or sub-total into the dynamic memory.

The transfer of a total or sub-total into the dynamic memory, which is known as the « automatic re-entry of totals », allows a result or partial result to be stored in the dynamic memory ready for further calculation (e.g., to be multiplied by another amount).

Example: $12 + 15 + 20 = 47$
(to be stored in the dynamic memory)

12 +
15 +
20 +
47 × T

Enter and add the individual amounts using key +D, depress the preselector key IM , and then depress key ✱: the register is cleared and the result, 47, is transferred into the

memory. The symbols printed alongside identify the operation that has been carried out.

D - Recalling an amount from the dynamic memory.

Depress in order the preselector key M and the +D or − key as required.
In the last section we transferred the amount 47 into the dynamic memory. If we now wish to recall this amount for addition in the register, we can do so by depressing in order keys M and +D. The machine prints the amount 47 and the symbols × +.

47 × +

By depressing keys M and − instead, we can recall the amount from the dynamic memory for subtraction in the register.

47 × −

E - Printing of amounts transferred into or recalled from the dynamic memory.

The printing of amounts in operations involving the dynamic memory is as follows:

- amounts entered on the keyboard which are simultaneously transferred into the dynamic memory and into the register are printed in blue (or black);

123 × +

- amounts which are transferred from the register into the dynamic memory are printed in red;

123 × T

- amounts which are recalled from the dynamic memory and added or subtracted in the register are printed in red.

123 × +
123 × −

MULTIPLICATION

A - Positive multiplication (automatic clearing of the product).

When a multiplication is carried out, the product obtained at the end of the operation will normally be retained in the register. To find out what the product is and to clear it from the register, depress key *. However, there is a special control on the Divisumma 24 which allows the automatic printing and clearing of the product. This control is the automatic total printing lever at the top of the keyboard towards the left-hand side: by moving it to the left (i.e., to position « A ») before beginning the multiplication, the machine can be preselected to print the product and clear it from the register at the end of the operation automatically.

A

Example: $12 \times 1{,}234 = 14{,}808$

Enter the first factor, 12, and depress key × (1).
Enter the second factor, 1,234, and depress key =.
On the tally roll, the factors are printed in blue (or black) and the product in red. For clearer and easier reading, the machine does not print any intermediate terms.

B - Constant factor.

The first factor entered on the keyboard (e.g., 12 in the previous ex-

(1) The first factor entered is treated by the machine as the multiplier. For this reason it is advisable, wherever practicable, to enter the small factor first, so that less machine cycles are involved in the operation.

ample) is transferred into the dynamic memory by means of the key.
This amount is then stored in the dynamic memory, even after the product has been printed and cleared from the register, and so can be employed – without re-entry – in a whole series of multiplications involving a constant factor.
In this way, once the constant factor has been entered and transferred into the memory, the series of multiplications can be carried out with only the variable factors needing to be entered each time.

Example:

$$12 \times 1{,}234 = 14{,}808$$
$$12 \times 1{,}580 = 18{,}960$$
$$12 \times 2{,}620 = 31{,}440$$

```
12 × <
1234 =
14808 T

1580 =
18960 T

2620 =
31440 T
```

Check that the automatic total printing lever is in position « A », enter 12, and depress key [×].
Enter 1,234 and depress key [=].
The machine carries out the first multiplication, printing the product 14,808 and clearing it from the register.
The factor, 12, remains in the dynamic memory, however, so that by entering 1,580 and depressing key [=] you can at once obtain the second product, 18,960. Proceed in the same way to obtain the third product.

C - Automatic sub-total.

The Divisumma 24 can be used to accumulate successive products if the small lever below the keyboard on the right-hand side is engaged (i.e., is moved into the « down » position).
This automatic sub-total lever functions only when the automatic total printing lever is also engaged; but when the two levers are engaged together, the progressive total of products is printed after each multiplication.

Example:

$$\begin{array}{rr} & (12 \times 12) \\ + & (123 \times 1{,}450) \\ + & (15 \times 456) \\ \hline = & 185{,}334 \end{array}$$

Check that the automatic total printing lever and the automatic sub-total lever are both engaged.
Enter 12 and depress key [×].
Enter 12 and depress key [=]. The product, 144, is obtained and printed as a sub-total.
Enter 123 and depress key [×].
Enter 1,450 and depress key [=].
The sum of the products of the two multiplications so far carried out, 178,494, is obtained and again printed as a sub-total.
Enter 15 and depress key [×].
Enter 456 and depress key [=]. The required sum of the products of all three multiplications is obtained and printed as a sub-total: 185,334.
To clear the register depress key [✱].

D - Automatic re-entry of a product (chain multiplication).

There is a device on the Divisumma 24 which makes possible the automatic re-entry of a product (i.e., the automatic transfer of a product from the register to the dynamic memory). For example, to perform the calculation $3 \times 5 \times 12$, we have first to carry out the multiplication $3 \times 5 = 15$ and then to transfer this product into the dynamic

```
12 × <
12 =
144 S

123 × <
1450 =
178494 S

15 × <
456 =
185334 S

185334 T
```

memory to be multiplied in its turn by 12, before we can obtain the final result: 180.

For this it is not necessary to re-enter the product 15 on the keyboard for transfer into the memory, nor even to make use of the preselector key IM. The procedure is, in fact, as follows:

Check that the automatic total printing lever is engaged, and the automatic sub-total lever disengaged.

A

Enter 3 and depress key X.

Enter 5 and depress key TR. The product, 15, is printed, together with the symbol × to indicate that it has been automatically transferred into the dynamic memory.

Enter 12 and depress key =. The required result, 180, is obtained and printed.

If more than three factors are concerned in the chain multiplication, the TR key should be used in place of the = key for all but the last operation.

3 × <
5 =
15 × T

12 =
180 T

E - Negative multiplication.

« Negative multiplication » is the term used to designate an operation by which a product is subtracted from an amount which is already in the register, or which is to be accumulated in the register at a later stage in the calculation.

On the Divisumma 24 this negative multiplication is achieved automatically by use of the ⊖ key in place of the = key.

Example:

2,000 + 3,300 — (23 × 45) = 4,265

Enter 2,000 and depress key +D.

Enter 3,300 and depress key +D.

Enter 23 and depress key X.

Enter 45 and depress key ⊖.

The symbol ⩤ is printed alongside the second factor to indicate the negative multiplication, and the result, 4,265, is obtained and printed in the normal manner.

2000 +
3300 +
23 × <
45 ⩤
4265 T

F - Capacity of the machine in multiplication.

The Divisumma 24 can carry out in a single operation any multiplication in which: (a) the digits of the factors concerned come to a total of not more than 13, when the left-hand digit of the factor transferred into the dynamic memory is less than 5 (i.e., is 1, 2, 3 or 4); or (b) the digits of the factors concerned make a total of not more than 12, when the left-hand digit of the factor transferred into the dynamic memory is 5 or more.

Example:

(13 digits)

421
× 1,234,567,891
= 519,713,082,111

(12 digits)

546
× 895,451,232
= 488,916,372,672

The Divisumma 24 automatically informs the operator when the multiplication being attempted exceeds this capacity: when the =, TR or ⊖ key is depressed, the machine remains inoperative. To unlock the keys and clear the keyboard, simply depress the clearing key ■.

421 × <
1234567891 =
519753082111 T

546 × <
895451232 =
488916372672 T

In practice, however, there is no limit to the size of multiplication that can be carried out on the Divisumma 24: there is a simple method whereby multiplications that exceed this capacity may be carried out.

Example:

$$\begin{array}{r} 4,521,368 \\ \times \quad 12,747,854,585 \\ \hline = 57,637,741,789,272,280 \end{array}$$

Check that the automatic total printing lever is engaged, and the automatic sub-total lever disengaged.
Enter the smaller factor, 4,521,368, and depress key ×.
Enter the first six digits (reading from the right) of the second factor, i.e., 854,585, and depress key =.
Ignoring the first six digits (reading from the right) of the product printed (i.e., the same number of digits as were entered from the second factor), enter the remaining digits, 3.863,893, and depress key +D.
Enter the remaining digits from the left of the second factor, 12,747, and depress key =. To this second product obtained, 57,637,741,789, add the last six digits of the first product obtained, 272,280, to give the final result: 57,637,741,789,272,280.

4521368 × <
854585 =
3863893272280 T

3863893 +
12747 =
57637741789 T

DIVISION

Example:

$$\frac{5,560}{42} = 132 \text{ (remainder 16)}$$

T
5560 +
5560 :
42 :
132 T
16 T

Check that the automatic total printing lever is engaged, and the automatic sub-total lever disengaged.
Enter 5,560 and depress key +D.
Enter 42 and depress key ÷.
The machine carries out the division automatically by first reprinting the dividend (in red) as a check (1), and then printing, at the end of the operative cycles, the divisor, the quotient, and the remainder, in that order (2).
The engagement of the automatic total printing lever causes both the quotient and the remainder to be printed and cleared from the register; if it is left disengaged before the beginning of the division, only the quotient is printed, and the remainder is left in the register for further use or for manual clearance (by depression of key *).

Automatic retention of the quotient and its uses

At the end of a division operation the quotient is stored automatically in the dynamic memory, ready for

(1) By reprinting the dividend in red, the Divisumma 24 provides visible proof of the accuracy of the calculation. This means that, if the register is not clear if the operator forgets to clear it, the error becomes immediately obvious. More importantly, it also means that if the dividend in a particular calculation is the sum of a series of additions or the product from a previous calculation, the value of this sum or product is automatically made known by its being printed as the dividend.

(2) If you wish to stop the machine in the middle of a division (e.g. because the dividend reprinting shows that the register was not clear beforehand, or because an answer accurate to a sufficient number of decimal places will already have been obtained), depress key C. This causes the machine to print the dividend as calculated to that point, followed by the remainder.

1245 +
1245 :
12 :
103 T
9 T

15 =
1545 T

1250 +
1250 :
12 :
104 T
2 T

104 × +
104 :
6 :
17 T
2 T

12636 +
12636 :
78 :
162 T
T

162 × +
293 +
455 T

immediate use in a subsequent operation.

1st Example: $\frac{1,245}{12} \times 15 = 1,545$

Check that the automatic total printing lever is engaged, and the automatic sub-total lever disengaged. Carry out the division operation as before. Enter 15 and depress key [=]: the required answer, 1,545, is obtained and printed.

2nd Example: $\frac{1,250}{12} : 6 = 17$

Carry out the first division operation. Depress the preselector key [M] followed by key [+D] to transfer the quotient, 104, still stored in the dynamic memory, to the register. Enter 6 and depress key [÷]: the required answer, 17, is obtained and printed.

3rd Example: $\frac{12,636}{78} + 293 = 455$

Carry out the division operation. Depress the preselector key [M] followed by key [+D], and then enter and add 293. Finally depress key [×]: the required answer, 455, is obtained and printed.

DETERMINING THE POSITION OF THE DECIMAL POINT

Multiplication

In multiplication the product will have as many decimal places as there are decimal places in the multiplier and multiplicand taken together.

Example: $3.23 \times 12 = 38.76$
$3.23 \times 12.15 = 39.2445$

In chain multiplications the principle remains the same: the number of decimal places in the product will be equal to the sum of decimal places in all the factors.

Example:
$1.07 \times 0.98 \times 1.41 \times 729 = 1,077.845454$

Division

Quotient: in division, the number of decimal places in the quotient will be equal to the number of decimal places in the dividend less the number in the divisor.
Remainder: in division, the number of decimal places in the remainder will be the same as the number in the dividend.
Two different types of case arise:
a) where the dividend is larger than the divisor;
b) where the dividend is smaller than the divisor.

a) where the dividend is larger than the divisor

1 - If neither the dividend nor the divisor has decimal places, the quotient will not have decimal places.

If, despite this, decimal places are required in the quotient, add as many zeros to the dividend as there are decimal places required in the quotient.

Example: $1,450 - 13$

(two decimal places are required in the quotient).

323 × <
12 =
3876 T

323 × <
1215 =
392445 T

107 × <
98 =
10486 × T

141 =
1478526 × T

729 =
1077845454 T

145000 +
145000 :
13 :
11153 T
11 T

Enter 1,450 followed by 00 and depress key +D.
Enter 13 and depress key ÷.
The quotient and remainder printed should be read as 111.53 and 0.11 respectively.

2 - Both the dividend and the divisor have decimal places, and the quotient is required with decimal places.

In this case, zeros must be added to either the dividend or the divisor as it is entered so that the number of decimal places in the dividend less the number of decimal places in the divisor is equal to the number of decimal places required in the quotient.

Example: *145.2 : 12.5*

(two decimal places are required in the quotient).

145200 +
145200 :
125 :
1161 T
75 T

Enter 145.2 followed by 00 and depress key +D.
Enter 12.5 and depress key ÷.
The quotient and remainder printed should be read as 11.61 and 0.075 respectively.

b) where the dividend is smaller than the divisor

Where the dividend is smaller than the divisor, zeros must be added to the dividend entered as necessary (at least as many zeros as there are digits in the divisor). The number of decimal places in the quotient will then be, as before, equal to the number of decimal places in the dividend less the number in the divisor.

Example: *5.2 : 234.6*

Enter 5.2 followed by 00 00 and depress key +D.
Enter 234.6 and depress key ÷.
The quotient and remainder printed should be read as 0.0221 and 0.01534 respectively.

520000 +
520000 :
2346 :
221 T
1534 T

Some typical applications

PRELIMINARY NOTE

In the « Application » section which follows it should be assumed, in the absence of any specific indication to the contrary, that the automatic total printing lever is engaged and the automatic sub-total lever disengaged.
Whenever a particular operation requires a different positioning of one or both of these control levers, this will be clearly indicated.

ADDITION AND SUBTRACTION

Adding a constant amount to a series of different amounts

Example:

1,748 + 478 = 2,226
344 + 478 = 822
871 + 478 = 1,349

Enter 1,748 and depress key +D.
Enter 478, depress the preselector key IM, and then key +D.
Depress key ×: the first answer, 2,226 is obtained and printed.

1748 +
478 × +
2226 T

344 +
478 × +
822 T

871 +
478 × +
1349 T

Enter 344 and depress key [+D].
Depress the preselector key [M] and then key [+D].
Depress key [✱]: the second answer, 822, is obtained and printed.
Carry out the third and any subsequent additions in the same way as the second.

Subtracting a constant amount from a series of different amounts

Example:

Calculate a series of net weights given the individual gross weights and a constant tare weight.

Gross weight	Tare weight	Net weight
145	*62*	*83*
186	*62*	*124*
209	*62*	*147*

145 +
62 × –
83 T

186 +
62 × –
124 T

209 +
62 × –
147 T

Enter 145 and depress key [+D].
Enter 62, depress the preselector key [IM], and then key [–].
Depress key [✱]: the first net weight, 83, is obtained and printed.
Enter 186 and depress key [+D].
Depress the preselector key [M] followed by key [–].
Depress key [✱]: the second net weight, 124, is obtained and printed.
Carry out the third and any subsequent operations in the same way as the second.

Series of addition sequences with individual totals and a grand total

Example:

123	*423*	*27*	
140	*12*	*144*	
1,930	*893*	*4,220*	
2,193	*1,328*	*4,391*	*= 7,912*

123 +
140 +
1930 +
2193 × T

423 +
12 +
893 +
1328 S

2193 × +
3521 × T

27 +
144 +
4220 +
4391 S

3521 × +
7912 T

Enter and add 123, 140, and 1,930.
Depress the preselector key [IM] and then key [✱]: the first total, 2,193, is printed and stored in the dynamic memory.
Enter and add 423, 12, and 893.
Depress key [◇]: the second total, 1,328, is printed.
Depress the preselector key [M] and then key [+D].
Depress the preselector key [IM] and then key: the progressive total is printed and stored in the dynamic memory.
Enter and add 27, 144, and 4,220.
Depress key [◇]: the third total, 4,391, is printed.
Depress the preselector key [M] and then key [+D]
Depress key [✱]: the progressive total, 7,912, is printed as the grand total of the three addition sequences.

MULTIPLICATION

Calculating discounts and percentage increases

Because of the large number of automatic devices on the Divisumma 24, percentages – whether discounts or percentage increases – can be carried out in several different ways.

Discounts

1 - The gross amount is multiplied as a constant factor, first by the discount rate and then by the complement of the rate to 100.

1st Example:

Discount 1,430 by 7 % to show both the value of the discount and the discounted (net) amount.

1430 × <
7 =
10010 T

93 =
132990 T

Enter 1,430 and depress key X.
Enter 7 and depress key =: the discount printed should be read as 100.10.
Enter 93 (the complement of 7 to 100) and depress key =: the net amount printed should be read as 1,329.90.

NOTE:

Since we are here dealing with percentages, it will be obvious that the answers printed must be divided mentally by 100.

2 - By a different procedure the decimal places can be eliminated.

2nd Example:

Discount 1,430 by 7 %.

1430 × <
7 =
10010 T

1430 × +
100 −
1330 T

Enter 1,430 and depress key X.
Enter 7 and depress key =: the discount printed should again be read as 100.10.
Depress consecutively keys M and +D.
Enter the value of the discount less its decimal places, 100, and depress key −.
Depress key *: the net amount, 1,330, is printed without decimal places.

3 - The discount and the net amount can be obtained simultaneously by a single multiplication. This method is particularly suitable for cases where different amounts require to be discounted by the same rate.

3rd Example:

Discount the following amounts by 7 %: 1,430 and 2,745.

93000007 × <
1430 =
132990010010 T

2745 =
255285019215 T

Enter 93, a « bridge » of five zeros, and 7 (93 000 00 7) and depress key X.
Enter 1,430 and depress key =: the answer printed should be read as the net amount, 1,329.90, followed by the value of the discount, 100.10.
Enter 2,745 and depress key =: the answer printed should be read as the net amount, 2,552.85, followed by the value of the discount, 192.15.

Percentage increases

1 - The amount to be increased is multiplied by the rate of increase and by the rate of increase plus 100.

1st Example:

Increase 1,430 by 15 % to show both the value of the increase and the increased amount.

1430 × <
15 =
21450 T

115 =
16450 T

Enter 1,430 and depress key X.
Enter 15 and depress key =: the percentage increase printed should be read as 214.50.
Enter 115 (15 + 100) and depress key =: the increased amount printed should be read as 1,644.50.

2 - By a different procedure the decimal places can be omitted.

2nd Example:

Increase 1,430 by 15 %.

1430 × <
15 =
21450 T

1430 × +
215 +
1645 T

Enter 1,430 and depress key X.
Enter 15 and depress key =: the percentage increase printed should again be read as 214.50.
Depress consecutively keys M and +D.
Enter 215 (the percentage increase rounded off to be nearest whole number) and depress key +D.
Depress key *: the increased amount printed should be read as 1,645.

3 - The percentage increase and the increased amount can be obtained simultaneously by a single multiplication. This method is particularly suitable for cases

where different amounts require to be increased by the same rate.

3rd Example:

Increase the following amounts by 12 %: 2,127, 5,850 and 3,425.

112000012 × <
2127 =
238224025524 T

5850 =
655200070200 T

3425 =
383600041100 T

Enter 112, a « bridge » of four zeros, and 12 (112 00 00 12) and depress key X.

Enter 2,127 and depress key =: the answer printed should be read as the increased amount, 2,382.24, followed by the value of the percentage increase, 255.24.

Enter 5,850 and depress key =: the answer printed should be read as the increased amount, 6,552, followed by the value of the percentage increase, 702.

Enter 3,425 and depress key =: the answer printed should be read as the increased amount, 3,836, followed by the value of the percentage increase, 411.

If there is a whole series of these operations, it will help in the reading of the answers to draw two vertical lines on the tally roll to correspond with the positions of the commas shown here:

1,120000,12.

Chain discount and percentage increase calculations

(Where it is required to show the values both of the discounts and percentage increases and of the discounted and increased amounts).

Example:

Initial amount 13,025
Discount 16 %
Percentage increase 3%

Enter 13,025 and depress key X.

Enter 16 and depress key =: the discount printed should be read as 2,084.

Enter 84 (the complement of 16 to 100) and depress key TR: the discounted amount printed, which is automatically transferred into the dynamic memory, should be read as 10,941.

Enter 3 and depress key =: the percentage increase printed should be read as 328.23.

Enter 103 and depress key =: the increased amount printed should be read as 11,269.23, and represents the net amount.

13025 × <
16 =
208400 T

84 =
1094100 × T

3 =
3282300 T

103 =
112692300 T

Invoicing

1st Example:

Extend the following invoice:

Quantity	Unit rate	Amount
24	*250*	*6,000*
52	*175*	*9,100*
Gross amount		*15,100*
Discount 6 %		
Percentage increase 3.3 %		
Net amount		*14,662*

Enter 24 and depress key X.

Enter 250 and depress key =: the value of the first extension, 6,000, is printed.

Engage the automatic sub-total lever.

Enter 52 and depress key X.

Enter 175 and depress key =: the value of the second extension, 9,100, is printed.

Enter 6,000 (the value of the first extension) and depress key +D.

Disengage the automatic sub-total lever.

Depress in order keys IM and ✱: the gross amount of the invoice,

24 × <
250 =
6000 T

52 × <
175 =
9100 S

6000 +
15100 × T

6 =
90600 T

94 =
1419400 T

14194 × <
33 =
468402 T

1033 =
14662402 T

15,100, is printed and transferred into the dynamic memory.
Enter 6 and depress key =: the discount printed should be read as 906.
Enter 94 (the complement of 6 to 100) and depress key ×: the discounted amount printed should be read as 14,194.
Enter 14,194 and depress key ×.
Enter 33 and depress key =: the percentage increase printed should be read as 468.402.
Enter 103.3 (100 + 3.3) and depress key =: the increased amount printed should be read as 14,662.402, and represents the net amount.

2nd Example:

Check the following invoice:

Item	Quantity	Unit Price	Amount
A	320	145	46,400
B	780	27	21,060
C	120	30	3,600
D	500	45	22,500
	Gross amount		93,560
	Less 12 % discount		11,227
	Discounted amount		82,333
	Plus 3.3 % sales tax		2,717
	Net amount		85,050

A

320 × <
145 =
780 × <
27 =
120 × <
30 =
500 × <
45 =
93560 × T

Disengage the automatic total printing lever.
Enter 320 and depress key ×.
Enter 145 and depress key =.
Enter 780 and depress key ×.
Enter 27 and depress key =.
Enter 120 and depress key ×.
Enter 30 and depress key =.
Enter 500 and depress key ×.
Re-engage the automatic total printing lever.
Enter 45 and depress key TR: the gross amount, 93,560, is printed, and automatically transferred into the dynamic memory.
Enter 88 (the complement of 12 to 100) and depress key TR: the discounted amount, 82,332.80, is printed and transferred into the dynamic memory.
Enter 1033.3 (100 + 3.3) and depress key =: the net amount is obtained as 85,049.78240, which is of course equivalent to the 85,050 shown on the invoice being checked.

88 =
8233280 × T

1033 =
8504978240 T

Wages

Example:

168 hours at 230 = 38,640
40 hours at 300 = 12,000
20 hours at 350 = 7,000
Gross pay = 57,640

Deductions:

on the gross pay = 7.00 %, 0.57 %, 0.15 %

on the gross pay less the allowance of 20,000 and less the three preceding deductions = 4.40 %

Carry out the three multiplication operations: hours worked × hourly rate.
Enter and add the three products obtained, and depress in order keys IM and ✱: the gross amount, 57,640, is printed, and transferred into the dynamic memory.
Enter in turn the three deduction rates, 700, 57, and 15, depressing key = after each entry; the three deductions printed should be read as 4,034.800, 328.5480, and 86.4600 respectively.
Enter in turn these three deductions, rounded off to the nearest unit, depressing key − after each entry: 4,035, 329 and 86.

168 × <
230 =
38640 T

40 × <
300 =
12000 T

20 × <
350 =
7000 T

38640 +
12000 +
7000 +
57640 × T

700 =
40348000 T

57 =
3285480 T

15 =
864600 T

4035 −
329 −
86 −
4450c S

57640 × +
2000 −
33190 × T

440 =
14603600 T

57640 +
4450 −
1460 −
51730 T

Depress key ◊: the total of the three deductions, 4,450, is printed.
Depress in order keys M and +D.
Enter 20,000 (the amount of the allowance) and depress key −.
Depress in order keys IM and ×.
Enter 440 and depress key =: the fourth deduction printed should be read as 1,460.3600.
Enter the gross pay, 57,640, and depress key +D.
Enter 4,450 (the sum of the first three deductions) and depress key −.
Enter 1,460 (the fourth deduction, rounded off to the nearest unit) and depress key −.
Depress key ×: the net pay, 51,730, is printed.

CALCULATING SURFACE AREAS AND VOLUMES

Calculating surface areas with the deduction of empty spaces

Example:

Calculate the net wall area of a four-walled room containing two doors and a window.

425 +
585 +
445 +
375 +
1830 × T

320 =
585600 S

Disengage the automatic total printing lever, leaving the automatic subtotal lever disengaged as well.
Enter and add the four overall wall lengths (4.25 + 5.85 + 4.45 + 3.75).
Depress in order keys IM and ×.
Enter 3.20 (the height of the walls) and depress key =.
Depress key ◊: the overall wall area printed should be read as 58.5600 square metres.
Enter 95 and depress key ×.
Enter 225 and depress key ⊖: the area of the first door is subtracted from the overall area.
Enter 130 and depress key ×.
Enter 225 and depress key ⊖: the area of the second door is subtracted from the overall area.
Engage the automatic total printing lever again.
Enter 190 and depress key ×.
Enter 150 and depress key ⊖: the net wall area printed should be read as 50.6475 square metres.

95 × <
225 ≥
130 × <
225 ≥
190 × <
150 ≥
506475 T

Calculating timber volumes and prices

No of pieces	Height	Width	Length
55	2 cm	22 cm	400 cm
125	3 cm	24 cm	410 cm
65	4 cm	25 cm	415 cm

Price 25,724 per cubic metre.

Enter 2 and depress key ×.
Enter 22 and depress key TR.
Enter 400 and depress key TR: the unit volume of the first item should be read as 0.0176 cubic metres (17,600 cubic centimetres).
Enter 55 and depress key =: the total volume of the first item should be read as 0.968 cubic metres.
Carry out the two other multiplication operations in the same way, in each case entering the number of pieces as the last factor so that the unit volumes can be obtained and printed.
Enter and add the total volumes, omitting the last two digits printed: 9,680, 36,900, and 26,975.

2 × <
22 =
44 × T

400 =
17600 × T

55 =
968000 T

3 × <
24 =
72 × T

410 =
29520 × T

125 =
3690000 T

4 × <
25 =
100 × T

415 =
41500 × T

65 =
2697500 T

9680 +
36900 +
26975 +
73555 × T

25724 =
1892128820 T

Depress in order keys IM and ✱: the grand total of volumes printed should be read as 7.3555 cubic metres.
Enter 25,724 and depress key =: the cost of the consignment printed should be read as 189,212.8820.

DIVISION

Interest calculations

Example 1:

Calculate the interest given the following data:

Principal	= P =	*25,000*
Days	= d =	*65*
Rate	= r =	*8 %*

The formula that applies is:

$$Interest = I = \frac{P.d.r.}{36{,}000}$$

A

25000 × <
65 =
1625000 × T

Enter 25,000 and depress key ×.
Enter 65 and depress key TR.
Disengage the automatic total printing lever.
Enter 8 and depress key =.
Re-engage the automatic total printing lever.
Enter 36,000 and depress key ÷: the interest, 361, is printed.

8 =
13000000 :
36000 :
361 T
4000 T

Example 2:

Calculate the interest using the shorter formula:

$$I = \frac{C.g.}{D}$$

where D = 36,000/r. = a fixed divisor taken from the table on page 35).

25000 × <
65 =
1625000 :
4500 :
361 T
500 T

Using the same data as given in example 1:
Disengage the automatic total printing lever.
Enter 25,000 and depress key ×.
Enter 65 and depress key =.
Enter 4,500 (the fixed divisor for 8 % given on page 35) and depress key ÷: the interest, 361, is printed.

Example 3:

Calculate the net receivable amount:

Bill ref.	Amount	Days
1	*15,500*	*30*
2	*28,000*	*50*
3	*42,850*	*90*

Rate = 8 % = (fixed divisor 4,500)
Commission: 120 per bill
Sales tax = 3.3 %

Disengage the automatic total printing lever, leaving the automatic subtotal lever disengaged as well.
Enter and add the amounts: 15,500, 28,000, and 42,850.
Depress key ✱: the gross amount, 86,350, is printed.
Carry out the three multiplication operations: 30 × 15,500, 50 × 28,000, and 90 × 42,850.
Re-engage the automatic total printing lever.
Enter 4,500 (the fixed divisor) and depress key ÷: the interest, 1,271, is printed.
Depress in order keys M and +D.
Enter 360 (= 3 × 120 = the total commission on the three bills) and depress key +D.
Depress in order keys IM and ✱.
Enter 3.3 and depress key =: the sales tax printed should be read as 53.823.
Depress in order keys M and +D.
Enter 54 (the sales tax rounded off to the nearest unit) and depress key +D.
Depress key ◇: the amount to be deducted, 1,685, is printed.

A

15500 +
28000 +
42850 +
86350 T

30 × <
15500 =
50 × <
28000 =
90 × <
42850 =
5721500 :
4500 :
1271 T
2000 T

1271 × +
360 +
1631 × T

33 =
53823 T

1631 × +
54 +
1685 S

86350 =
84665c T

Enter the gross amount, 86,350, and depress key [−].
Depress key [✱]: the net receivable amount, 84,655, is printed.

Calculating averages and means

Simple arithmetical averages.

Example 1:

Calculate the average of the following amounts: 475, 620, 744, and 861.

The formula that applies is

$$\text{Average} = \frac{a + b + c + d}{4}$$

```
475  +
620  +
744  +
861  +
2700 :
4    :
675  T
     T
```

Enter and add the four amounts.
Enter 4 and depress key [÷]: the average of the four amounts, 675, is printed.

Example 2:

Average price.

Quantity	Unit Price
620 kg	205 per kg
800 kg	285 per kg

$$\text{Average price} = \frac{(620 \times 205) + (800 \times 285)}{(620 + 800)}$$

A [●] [▮]

```
620     +
800     +
1420    T

620  × <
205  =
800  × <
285  =
355100  :
1420    :
250     T
100     T
```

Disengage the automatic total printing lever, leaving the automatic subtotal lever disengaged as well.
Enter and add the two quantities, and depress key [✱]: the sum of the quantities, 1,420, is printed.
Carry out the two multiplication operations: 620×205, and 800×285.
Re-engage the automatic total printing lever.
Enter the sum of the quantities, 1,420, and depress key [÷]: the average price, 250, is printed.

Percentages

Example 1:

Discount percentages.

An article whose list price is 18,500 is sold for 16,280: find the percentage discount of the sale price on the list price.

Enter 16,280 00 and depress key [+D].
Enter 18,500 and depress key [÷].
Enter 100 and depress key [+D].
Depress in order keys [M] and [−].
Depress key [✱]: the discount percentage required, 12 %, is printed.

Example 2:

Reduction percentages (same as discount percentages).

A piece of material weighing 1,626 kg originally weighs only 1,383 kg after drying: find the percentage loss in weight.

Enter 1,383 00 00 and depress key [+D].
Enter 1,626 and depress key [÷].
Enter 100 00 and depress key [+D].
Depress in order keys [M] and [−].
Depress key [✱]: the percentage loss in weight required, 14.95 %, is printed.
(To obtain a percentage to two decimal places simply add four zeros to the dividend – i.e., to the final weight in this example – and find the complement of the quotient to 100 00).

Example 3:

Percentage increases.

Sales turnover was 8,640,500 in 1961, and 9,125,250 in 1962: find the percentage increase of 1962 sales over 1961 sales.

Enter 9,125,250 00 00 (in order to obtain two decimal places in the result) and depress key [+D].

A [●]

```
1628000  +
1628000  :
18500    :
88       T
         T

100      +
88     × −
12       T

13830000  +
13830000  :
1626      :
8705      T
870       T

10000     +
8505    × −
1495      T

91252500000  +
91252500000  :
8640500      :
10561        T
179500       T
```

Enter 8,640,500 and depress key ÷: the quotient printed is 105.61, showing a percentage increase of 5.61 %.

Example 4:

Profit percentages.

An article which cost 130,000 is sold for 185,000: find the percentage profit or the selling over the cost price.

13000000 +
13000000 :
185000 :
70 T
50000 T

Enter 130,000 00 and depress key +D.
Enter 185,000 and depress key ÷.
Enter 100 and depress key +D.

100 +
70 × –
30 T

Depress in order keys M and –.
Depress key ×: the percentage profit required, 30 %, is printed.

Example 5:

Incidence percentages.

From 1,200 kg of raw material the following quantities have been obtained:

350 kg of product A
200 kg of product B
150 kg of product C
500 kg of product D
1,200 kg

Find the percentage which each product represents of the original raw material.

In the normal way this calculation would be carried out in a series of divisions, using 1,200 as a constant divisor; but, for greater speed, the reciprocal of 1,200 can be worked out beforehand and used as a constant factor in a series of multiplications.

1000000 +
1000000 :
1200 :
833 T
400 T

Enter 1,000,000 and depress key +D.
Enter 1,200 and depress key ÷: the reciprocal of 1,200 is printed and automatically retained in the dynamic memory for uses as a constant factor.

350 =
291550 T

Enter 350 and depress key ÷: the percentage of the total amount represented by product A, 29.1550 %, is printed.

200 =
166600 T

Enter 200 and depress key ÷: the second percentage, 16.6600 %, is printed.

150 =
124950 T

Enter 150 and depress key ÷: the third percentage, 12.495%, is printed.

500 =
416500 T

Enter 500 and depress key ÷: the fourth percentage, 41.6500 %, is printed.

Adding sterling amounts (British monetary system)

The British monetary system consists of the following values:

- Pound sterling (symbol £), equal to 20 shillings;
- Shilling (symbol s. or /-), equal to 12 pence;
- Penny (symbol d.) subdivided into 2 halfpennies.

Thus the amount 2 pounds, 9 shillings, and 11 pence may be written as £2.9s.11d., or (more commonly) as £2.9.11d. or 49/11d., or (most commonly) as £2.9.11.

Sterling amounts cannot be added directly in the decimal system, or therefore on a decimal calculator such as the Divisumma 24; but they can be added if the pounds, shillings, and pence are added separately, and the total shillings and pence are then re-expressed as pounds shillings and pence.

+ 23.18. 6
+ 58. 8.10
+ 68.15. 2
+ 24. 6.11
+ 172.18. 9
= 348. 8. 2

23018006 +
58008010 +
68015002 +
24006011 +
172018009 +
345065038 T

Provided that (as in this example) neither the total sum of shillings nor

the total sum of pence is likely to exceed 999, allow the last six entry columns for the shillings and pence (three to each), entering and adding as follows:

23	018	006
58	008	010
68	015	002
24	006	011
172	018	009
345	065	038

At the end of the addition series, depress key ✱: the total is printed as 345065038, representing 345 pounds, 65 shillings, and 38 pence.

To convert the pence into shillings:

```
38   +
38   :
12   :
3    T
2    T
```

Enter 38 (the number of pence) and depress key +D.
Enter 12 (the number of pence in a shilling) and depress key ÷: the quotient printed, 3, represents the number of shillings, and the remainder, 2, the number of pence.

To convert the shillings into pounds:

```
3 × +
65   +
68   :
20   :
3    T
8    T
```

Depress in order keys M and +D.
Enter 65 (the number of shillings) and depress key +D.
Enter 20 (the number of shillings in a pound) and depress key ÷: the quotient printed, 3, represents the number of pounds, and the remainder, 8, the number of shillings.

To obtain the pounds:

```
3 × +
345  +
348  T
```

Depress in order keys M and +D.
Enter 345 (the number of pounds already obtained) and depress key +D.
Depress key ✱: the number of pounds, 348, is printed.

The answer to the addition is, therefore, properly expressed in pounds, shillings and pence, £348.8.2.

Converting sterling currency to decimal currency (U. S. dollars)

Example:

Convert the following sterling amounts into U. S. dollars, given that £1.0.0 = $2.80: £15.12.5, 239.10.0, and 47.9.11.

```
                T
28 × <
1562083  =
43738324 T

23950000 =
670600000 T

474583   =
13288324 T
```

Enter 28 and depress key X.
Enter 1562083 (£15.12.5 expressed as pounds and decimals of a pound, read from the table on page 37) and depress key =: the dollar equivalent printed should be read as $43.738324, or $43.74.
Enter 23950000 and depress key =: the dollar equivalent printed should be read as $670.60.
Enter 474583 and depress key =: the dollar equivalent printed should be read as $132.89.

Converting decimal currency (U. S. dollars) into sterling currency

Example:

Convert $86,325 into pounds, shillings, and pence, given that £1 = $2.80.

```
8632500000 +
8632500000 :
280        :
30830357   T
40         T

357 × <
20    =
7140  T

140 × <
12    =
1680  T
```

Enter 86,325 00 000 (the extra zeros to provide sufficient decimal places for accuracy) and depress key +D.
Enter 280 (the number of dollars to one pound) and depress key ÷: the quotient printed should be read as £30,830.357.
Enter 357 (the decimal place digits of the quotient just printed) and depress key X.
Enter 20 (the number of shillings in a pound) and depress key =:

the product printed should be read as 7.140s.
Enter 140 (the decimal place digits of the product just printed) and depress key [×].
Enter 12 and depress key [=]: the product printed should be read as 1.68d.
The answer required is, therefore, to the nearest penny, £30,830.7.2d.
(The answer may also be obtained by reading off the decimal places of a pound obtained in the first division from the conversion table on page 38).

Sterling invoicing

Example:

Quantity	Unit price	Amount
25	3.15. 6	94. 7. 6
16	4. 9.11	71.18. 8
5	7. 3. 3	35.16. 3
Gross amount		202. 2. 5
Less 12 %		24. 5. 1
Net amount		177.17. 4

Disengage the automatic total printing lever, leaving the automatic subtotal lever disengaged as well.

Calculate the first extension of the invoice as follows:

Enter 3 (the number of pounds in the unit price) and depress key [×].
Enter 240 (the number of pence in a pound) and depress key [=].
Enter 15 (the number of shillings in the unit price) and depress key [×].
Enter 12 (the number of pence in a shilling) and depress key [=].
Enter 6 (the number of pence in the unit price) and depress key [+D].
Depress in order keys [IM] and [*]: the unit price expressed in pence only, 906, is printed and transferred into the dynamic memory.
Enter 25 (the quantity) and depress key [=].
Enter 240 (again as the number of pence in a pound) and depress key [=]: the machine prints in order the dividend 22,650 (the extended amount expressed in pence only), the divisor 240, and the quotient 94 (the number of pounds in the extended amount, as required).
Enter 12 (again as the number of pence in a shilling) and depress key [=]: the machine prints in order the dividend, 90, the divisor, 12, and the quotient, 7, (the number of shillings in the extended amount, as required).
Depress key [*]: the machine prints the remainder, 6, (the number of pence in the extended amount, as required).
The first extended amount is, therefore, £94.7.6.
Repeat the procedure to calculate the second and third extensions: 16×£4.9.11 = £71.18.8, and 5×£7.3.3 = £35.16.3.

Calculate the gross amount of the invoice as follows:

Enter and add the three extended amounts (as expressed in pence only): 22,650, 17,264, and 8,595.
Enter 240 and depress key [=]: the machine prints in order the dividend, 48,509, (the gross amount expressed in pence only), the divisor, 240, and the quotient, 202, (the number of pounds in the gross amount, as required).
Enter 12 and depress key [=]: the

```
3 × <
240 =
15 × <
12 =
6 +
906 × T

25 =
22650 :
240 :
94 T
90 :
12 :
7 T
6 T

4 × <
240 =
9 × <
12 =
11 +
1079 × T

16 =
17264 :
240 :
71 T
224 :
12 :
18 T
8 T

7 × <
240 =
3 × <
12 =
3 +
1719 × T

5 =
8595 :
240 :
35 T
195 :
12 :
16 T
3 T
```

22650 +
17264 +
8595 +
48509 :
240 :
202 T
29 :
12 :
2 T
5 T

machine prints in order the dividend, 29, the divisor, 12, and the quotient, 2, (the number of shillings in the gross amount, as required).

Depress key ✱: the machine prints the remainder, 5, (the number of pence in the gross amount, as required).

The gross amount of the invoice is, therefore, £202.2.5.

Calculate the discount and the net amount as follows:

Enter 48,509 (the gross amount of the invoice expressed in pence only) and depress key ×.

Enter 12 (the discount rate) and depress key =.

Enter 240 00 (two extra zeros to effect the necessary division by 100) and depress key ÷: the machine prints in order the dividend, 582108, the divisor, 24000, and the quotient, 24, (the number of pounds in the discount, as required).

Enter 12 00 (again two extra zeros to effect the necessary division by 100) and depress key ÷: the machine prints in order the dividend, 6108, the divisor, 1200, and the quotient, 5, (the number of shillings in the discount), as required.

Depress key ✱: the remainder printed should be read as 1.08 (the number of pence in the discount, as required).

The amount of the discount is therefore, to the nearest penny, £34.5.1.

Repeat the procedure to calculate the net amount, using the factor 88 (the complement of 12 to 100) in place of the discount rate itself.

48509 × <
12 =
582108 :
24000 :
24 T
6108 :
1200 :
5 T
108 T

48509 × <
88 =
4268792 :
24000 :
177 T
20792 :
1200 :
17 T
392 T

The net amount of the invoice is printed as £177.17.4 (to the nearest penny).

Square and cube roots

Used in conjunction with standard tables, the Divisumma 24 can provide quick square and cube roots of numbers larger than those given in the tables themselves.

Example 1:

Find the square root of 1,547.88 (correct to four decimal places).

Enter 154788 00 00 00 (i.e., 1,547.88 plus sufficient zeros to provide two decimal places for every one decimal place required in the answer) and depress key +D.

Enter the nearest approximation to the true square root given by the tables – i.e., 39.3446 = the square root of 1,548 – and depress key ÷. As soon as the machine begins its division cycles, engage the repeat lever and hold it in the engaged position until the quotient and the remainder have been printed.

Depress key +D.

Depress in order keys M and +D.

Enter 2 and depress key ÷.

The quotient obtained should be read as 39.3431, and represents a closer approximation to the square root required.

Re-enter 154788 00 00 00 and depress key +D.

Enter the quotient just obtained, 39.3431, and depress key ÷.

Engage the repeat lever as before and hold it in the engaged position

154788000000 +
154788000000 :
393446 :
393416 T
48464 T

393446 +
392416 × +
786862 :
2 :
302431 T
T

154788000000 +
154788000000 :
393431 :
393431 T
48239 T

until the quotient and the remainder have been printed.
It will be noticed that the quotient printed, which should be read as 39.3431, is now equal to the divisor; this means that the amount may be taken as the required square root of 1,547.88, correct to four decimal places. If it had not been equal to the divisor, the procedure would have been continued until an equal quotient and divisor were found.

423734000000 +
423734000000 :
7513 :
56400106 T
3622 T

56400106 × +
56400106 :
7513 :
7507 T
15 T

7513 +
7513 +
7507 × +
22533 :
3 :
7511 T
T

Example 2:

Find the cube root of 423,734 (correct to two decimal places).

Enter 423734 000 000 (i.e., 423,734 plus sufficient zeros to provide three decimal places for every one decimal place required in the answer) and depress key [+D].
Enter the nearest approximation to the true cube root given by the tables – i.e., 7.513 = the cube root of 424 – and depress key [÷].
After the quotient and remainder have been printed, depress in order keys [M] and [+D].
Re-enter 7513 and depress key [÷].
As soon as the machine begins its division cycles, engage the repeat lever and hold it in the engaged position until the quotient and the remainder have been printed.

423734000000 +
423734000000 :
7511 :
56415124 T
3636 T

Depress key [+D] twice.
Depress in order keys [M] and [+D].

56415124 × +
56415124 :
7511 :
7511 T
3 T

Enter 3 and depress key [÷].
The quotient obtained should be read as 75.11, and represents a closer approximation to the cube root required.

Re-enter 423734 000 000 and depress key [+D].
Enter the quotient just obtained, 75.11, and depress key [÷].
After the quotient and the remainder have been printed, depress in order keys [M] and [+D].
Re-enter 75.11 and depress key [÷].
Engage the repeat lever as before and hold it in the engaged position until the quotient and the remainder have been printed.
It will be noticed that the quotient printed, which should be read as 75.11, is equal to the two divisors entered immediately before; this means that the amount may be taken as the required cube root of 423,734, correct to two decimal places.

NOTES:

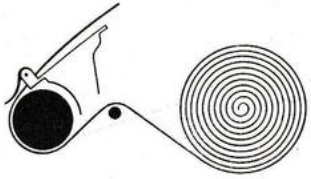
1 - Often it will be found that the eventual quotient and divisor (or divisors), instead of being equal to each other, exhibit a small difference: of 1 in the case of square roots, and of 1 or 2 in the case of cube roots. In these cases it will usually be clear which of the amounts represents the true root; but, if in doubt, resolve the matter by squaring or cubing each of the amounts concerned and comparing the product with the original amount.

2 - The more accurate the first divisor entered, the shorter and quicker the operations required to find the correct square or cube root. For this reason it is always advisable to begin from standard tables. Nevertheless, if for any reason tables are not available, the method may still be applied, and a mental approximation to the required root employed as the first divisor.

Information for the operator

HOW TO FIT THE TALLY ROLL

Unwind the last few inches of the tally roll. Keeping this loose end underneath and unwinding it towards the front of machine, open out the two movable brackets at the back of the machine by slight finger pressure and fit the roll between them. As the finger pressure is released, the brackets will spring back and grip the roll firmly.
Feed the loose end over the metal bar and underneath the back of the platen. Then, by revolving the platen knob, wind the tally roll up, guide it under the metal column markers and over the paper table. Standard replacement tally rolls (width 3½") are available through the Olivetti organisation.



The rubber platen itself is designed to accommodate, besides tally rolls of the standard width, cards and sheets of paper up to 5⅛" wide. This allows calculations to be printed on pre-printed forms and lists.

PAPER TABLE

Situated immediately above the platen is a paper table designed to allow handwritten notes to be added to the calculation just carried out. It also prevents all chance of the tally roll curling back round the platen.

PAPER RELEASE LEVER

The paper release lever situated at the right-hand side of the paper table can be pushed down to free the grip of the feed rolls on the tally roll, and so to allow the roll to be adjusted for perfect alignment.

HOW TO CHANGE THE RIBBON

Raise the black upper part of the machine's outer casing by easing it up from the front and pushing it back as far as it will go, and lift the metal column marker frame back on to the paper table.
Move back each of the two arms holding the ribbon against the spools until they are at right-angles to the sides of the machine, and lift the ribbon out on its spools. Unwind the ribbon from one of the spools, and fit the end of the new ribbon to this empty spool.
Set the two spools carrying the new ribbon back on their spindles, taking care that the red half of the ribbon is underneath. Fit the ribbon round the two ribbon guides situated close to each of the spools, close the ribbon arms again, re-

place the metal column marker frame, and set the black upper part of the casing back in position.
New ribbons for the Divisumma 24 are available through the Olivetti organisation.

ELECTRIC MOTOR

The electric motor is designed specifically for the Divisumma 24, and is built into the machine in such a way that it is fully protected from damage and dust while still being readily accessible.
It is an induction motor, fitted with suppressors against radio and television interference. Its speed, which is related to the frequency of the power supply, is 250 cycles a minute on 230 volts. Under no circumstances should it be used on DC power supply, or on an AC power supply outside the range indicated on the plate attached to the outside of the motor. So that the best results and full efficiency can be obtained from any AC voltage, the motor is fitted with a built-in voltage selector which can be adapted to any between 110 and 230 V.

TAKING CARE OF THE MACHINE

The Olivetti Divisumma 24 is a precision product built to give continuous and reliable service over a period of many years. Its strength of construction ensures a high degree of resistance to wear.
Nevertheless the Divisumma 24, in common with all precision engineering products, must be protected from dust. For this reason it is supplied with a dust cover which should always be put over the machine when it is not in use.
Should the machine require mechanical attention at any time, even if only for lubrication, make sure that it is entrusted to a qualified person. The Olivetti organisation, through its Branches and Main Agents, maintains a force of trained specialist mechanics to provide all necessary mechanical attention.

Tables

For the convenience of the operator some of the tables most frequently used are given in the following pages:

reciprocals;
interest conversion factors (divisors and multipliers);
conversion factors;
decimal values of English currency;
days expressed as decimal equivalent of a year;
dozens and units expressed in decimals of one gross;
number of days between two dates;
decimal equivalents of common fractions.

Reciprocals of numbers from 1 to 1000

The following tables give only the decimal figures of the reciprocals.
Thus: the reciprocals of 300 is .0033333.

For numbers greater than 1,000, move the decimal point one place to the left for each additional decimal unit.

For example:
Reciprocal of 3,000 is .00033333.
Reciprocal of 30,000 is .000033333.

1 = 1	**41** 024390	**81** 012346	**121** 0082645	**161** 0062112
2 50000	**42** 023810	**82** 012195	**122** 0081967	**162** 0061728
3 33333	**43** 023256	**83** 012048	**123** 0081301	**163** 0061350
4 25000	**44** 022727	**84** 011905	**124** 0080645	**164** 0060976
5 20000	**45** 022222	**85** 011765	**125** 0080000	**165** 0060606
6 16667	**46** 021739	**86** 011628	**126** 0079365	**166** 0060241
7 14286	**47** 021277	**87** 011494	**127** 0078740	**167** 0059880
8 12500	**48** 020833	**88** 011364	**128** 0078125	**168** 0059524
9 11111	**49** 020408	**89** 011236	**129** 0077519	**169** 0059172
10 10000	**50** 020000	**90** 011111	**130** 0076923	**170** 0058823
11 090909	**51** 019608	**91** 010989	**131** 0076336	**171** 0058480
12 083333	**52** 019231	**92** 010870	**132** 0075758	**172** 0058140
13 076923	**53** 018868	**93** 010753	**133** 0075188	**173** 0057803
14 071429	**54** 018519	**94** 010638	**134** 0074627	**174** 0057471
15 066667	**55** 018182	**95** 010526	**135** 0074074	**175** 0057143
16 062500	**56** 017857	**96** 010417	**136** 0073529	**176** 0056818
17 058824	**57** 017544	**97** 010309	**137** 0072993	**177** 0056497
18 055556	**58** 017241	**98** 010204	**138** 0072464	**178** 0056180
19 052632	**59** 016949	**99** 010101	**139** 0071942	**179** 0055866
20 050000	**60** 016667	**100** 010000	**140** 0071429	**180** 0055556
21 047619	**61** 016393	**101** 0099010	**141** 0070922	**181** 0055249
22 045455	**62** 016129	**102** 0098039	**142** 0070423	**182** 0054945
23 043478	**63** 015873	**103** 0097087	**143** 0069930	**183** 0054645
24 041667	**64** 015625	**104** 0096154	**144** 0069444	**184** 0054348
25 040000	**65** 015385	**105** 0095238	**145** 0068966	**185** 0054054
26 038462	**66** 015152	**106** 0094340	**146** 0068493	**186** 0053763
27 037037	**67** 014925	**107** 0093458	**147** 0068027	**187** 0053476
28 035714	**68** 014706	**108** 0092593	**148** 0067568	**188** 0053191
29 034483	**69** 014493	**109** 0091743	**149** 0067114	**189** 0052910
30 033333	**70** 014286	**110** 0090909	**150** 0066667	**190** 0052632
31 032258	**71** 014085	**111** 0090090	**151** 0066225	**191** 0052356
32 031250	**72** 013889	**112** 0089286	**152** 0065789	**192** 0052083
33 030303	**73** 013699	**113** 0088496	**153** 0065359	**193** 0051813
34 029412	**74** 013514	**114** 0087719	**154** 0064935	**194** 0051546
35 028571	**75** 013333	**115** 0086957	**155** 0064516	**195** 0051282
36 027778	**76** 013158	**116** 0086207	**156** 0064103	**196** 0051020
37 027027	**77** 012987	**117** 0085470	**157** 0063694	**197** 0050761
38 026316	**78** 012821	**118** 0084746	**158** 0063291	**198** 0050505
39 025641	**79** 012658	**119** 0084034	**159** 0062893	**199** 0050251
40 025000	**80** 012500	**120** 0083333	**160** 0062500	**200** 0050000

201 0049751	**241** 0041494	**281** 0035587	**321** 0031153	**361** 0027701
202 0049505	**242** 0041322	**282** 0035461	**322** 0031056	**362** 0027624
203 0049261	**243** 0041152	**283** 0035336	**323** 0030960	**363** 0027548
204 0049020	**244** 0040984	**284** 0035211	**324** 0030864	**364** 0027473
205 0048780	**245** 0040816	**285** 0035088	**325** 0030769	**365** 0027397
206 0048544	**246** 0040650	**286** 0034965	**326** 0030675	**366** 0027322
207 0048309	**247** 0040486	**287** 0034843	**327** 0030581	**367** 0027248
208 0048077	**248** 0040323	**288** 0034722	**328** 0030488	**368** 0027174
209 0047847	**249** 0040161	**289** 0034602	**329** 0030395	**369** 0027100
210 0047619	**250** 0040000	**290** 0034483	**330** 0030303	**370** 0027027
211 0047393	**251** 0039841	**291** 0034364	**331** 0030211	**371** 0026954
212 0047170	**252** 0039683	**292** 0034247	**332** 0030120	**372** 0026882
213 0046948	**253** 0039526	**293** 0034130	**333** 0030030	**373** 0026810
214 0046729	**254** 0039370	**294** 0034014	**334** 0029940	**374** 0026738
215 0046512	**255** 0039216	**295** 0033898	**335** 0029851	**375** 0026667
216 0046296	**256** 0039063	**296** 0033784	**336** 0029762	**376** 0026596
217 0046083	**257** 0038911	**297** 0033670	**337** 0029674	**377** 0026525
218 0045872	**258** 0038760	**298** 0033557	**338** 0029586	**378** 0026455
219 0045662	**259** 0038610	**299** 0033445	**339** 0029499	**379** 0026385
220 0045455	**260** 0038462	**300** 0033333	**340** 0029412	**380** 0026316
221 0045249	**261** 0038314	**301** 0033223	**341** 0029325	**381** 0026247
222 0045045	**262** 0038168	**302** 0033113	**342** 0029240	**382** 0026178
223 0044843	**263** 0038023	**303** 0033003	**343** 0029155	**383** 0026110
224 0044643	**264** 0037879	**304** 0032895	**344** 0029070	**384** 0026042
225 0044444	**265** 0037736	**305** 0032787	**345** 0028986	**385** 0025974
226 0044248	**266** 0037594	**306** 0032680	**346** 0028902	**386** 0025907
227 0044053	**267** 0037453	**307** 0032573	**347** 0028818	**387** 0025840
228 0043860	**268** 0037313	**308** 0032468	**348** 0028736	**388** 0025773
229 0043668	**269** 0037175	**309** 0032362	**349** 0028653	**389** 0025707
230 0043478	**270** 0037037	**310** 0032258	**350** 0028571	**390** 0025641
231 0043290	**271** 0036900	**311** 0032154	**351** 0028490	**391** 0025575
232 0043103	**272** 0036765	**312** 0032051	**352** 0028409	**392** 0025510
233 0042918	**273** 0036630	**313** 0031949	**353** 0028329	**393** 0025445
234 0042735	**274** 0036496	**314** 0031847	**354** 0028249	**394** 0025381
235 0042553	**275** 0036364	**315** 0031746	**355** 0028169	**395** 0025316
236 0042373	**276** 0036232	**316** 0031646	**356** 0028090	**396** 0025253
237 0042194	**277** 0036101	**317** 0031546	**357** 0028011	**397** 0025189
238 0042017	**278** 0035971	**318** 0031447	**358** 0027933	**398** 0025126
239 0041841	**279** 0035842	**319** 0031348	**359** 0027855	**399** 0025063
240 0041667	**280** 0035714	**320** 0031250	**360** 0027778	**400** 0025000

401 0024938	**441** 0022676	**481** 0020790	**521** 0019194	**561** 0017825
402 0024876	**442** 0022624	**482** 0020747	**522** 0019157	**562** 0017794
403 0024814	**443** 0022573	**483** 0020704	**523** 0019120	**563** 0017762
404 0024752	**444** 0022523	**484** 0020661	**524** 0019084	**564** 0017731
405 0024691	**445** 0022472	**485** 0020619	**525** 0019048	**565** 0017699
406 0024631	**446** 0022422	**486** 0020576	**526** 0019011	**566** 0017668
407 0024570	**447** 0022371	**487** 0020534	**527** 0018975	**567** 0017637
408 0024510	**448** 0022321	**488** 0020492	**528** 0018939	**568** 0017606
409 0024450	**449** 0022272	**489** 0020450	**529** 0018904	**569** 0017575
410 0024390	**450** 0022222	**490** 0020408	**530** 0018868	**570** 0017544
411 0024331	**451** 0022173	**491** 0020367	**531** 0018832	**571** 0017513
412 0024272	**452** 0022124	**492** 0020325	**532** 0018797	**572** 0017483
413 0024213	**453** 0022075	**493** 0020284	**533** 0018762	**573** 0017452
414 0024155	**454** 0022026	**494** 0020243	**534** 0018727	**574** 0017422
415 0024096	**455** 0021978	**495** 0020202	**535** 0018692	**575** 0017391
416 0024038	**456** 0021930	**496** 0020161	**536** 0018657	**576** 0017361
417 0023981	**457** 0021882	**497** 0020121	**537** 0018622	**577** 0017331
418 0023923	**458** 0021834	**498** 0020080	**538** 0018587	**578** 0017301
419 0023866	**459** 0021786	**499** 0020040	**539** 0018553	**579** 0017271
420 0023810	**460** 0021739	**500** 0020000	**540** 0018519	**580** 0017241
421 0023753	**461** 0021692	**501** 0019960	**541** 0018484	**581** 0017212
422 0023697	**462** 0021645	**502** 0019920	**542** 0018450	**582** 0017182
423 0023641	**463** 0021598	**503** 0019881	**543** 0018419	**583** 0017153
424 0023585	**464** 0021552	**504** 0019841	**544** 0018382	**584** 0017123
425 0023529	**465** 0021505	**505** 0019802	**545** 0018349	**585** 0017094
426 0023474	**466** 0021459	**506** 0019763	**546** 0018315	**586** 0017065
427 0023419	**467** 0021413	**507** 0019724	**547** 0018282	**587** 0017036
428 0023364	**468** 0021368	**508** 0019685	**548** 0018248	**588** 0017007
429 0023310	**469** 0021322	**509** 0019646	**549** 0018215	**589** 0016978
430 0023256	**470** 0021277	**510** 0019608	**550** 0018182	**590** 0016949
431 0023202	**471** 0021231	**511** 0019569	**551** 0018149	**591** 0016920
432 0023148	**472** 0021186	**512** 0019531	**552** 0018116	**592** 0016892
433 0023095	**473** 0021142	**513** 0019493	**553** 0018083	**593** 0016863
434 0023041	**474** 0021097	**514** 0019455	**554** 0018051	**594** 0016835
435 0022989	**475** 0021053	**515** 0019417	**555** 0018018	**595** 0016807
436 0022936	**476** 0021008	**516** 0019380	**556** 0017986	**596** 0016779
437 0022883	**477** 0020964	**517** 0019342	**557** 0017953	**597** 0016750
438 0022831	**478** 0020921	**518** 0019305	**558** 0017921	**598** 0016722
439 0022779	**479** 0020877	**519** 0019268	**559** 0017889	**599** 0016694
440 0022727	**480** 0020833	**520** 0019231	**560** 0017857	**600** 0016667

601 0016639	**641** 0015601	**681** 0014684	**721** 0013870	**761** 0013141
602 0016611	**642** 0015576	**682** 0014663	**722** 0013850	**762** 0013123
603 0016584	**643** 0015552	**683** 0014641	**723** 0013831	**763** 0013106
604 0016556	**644** 0015528	**684** 0014620	**724** 0013812	**764** 0013089
605 0016529	**645** 0015504	**685** 0014599	**725** 0013793	**765** 0013072
606 0016502	**646** 0015480	**686** 0014577	**726** 0013774	**766** 0013055
607 0016474	**647** 0015456	**687** 0014556	**727** 0013755	**767** 0013038
608 0016447	**648** 0015432	**688** 0014535	**728** 0013736	**768** 0013021
609 0016420	**649** 0015408	**689** 0014514	**729** 0013717	**769** 0013004
610 0016393	**650** 0015385	**690** 0014493	**730** 0013699	**770** 0012987
611 0016367	**651** 0015361	**691** 0014472	**731** 0013680	**771** 0012970
612 0016340	**652** 0015337	**692** 0014451	**732** 0013661	**772** 0012953
613 0016313	**653** 0015314	**693** 0014430	**733** 0013643	**773** 0012937
614 0016287	**654** 0015291	**694** 0014409	**734** 0013624	**774** 0012920
615 0016260	**655** 0015267	**695** 0014388	**735** 0013605	**775** 0012903
616 0016234	**656** 0015244	**696** 0014368	**736** 0013587	**776** 0012887
617 0016207	**657** 0015221	**697** 0014347	**737** 0013569	**777** 0012870
618 0016181	**658** 0015198	**698** 0014327	**738** 0013550	**778** 0012853
619 0016155	**659** 0015175	**699** 0014306	**739** 0013532	**779** 0012837
620 0016129	**660** 0015152	**700** 0014286	**740** 0013514	**780** 0012821
621 0016103	**661** 0015129	**701** 0014265	**741** 0013495	**781** 0012804
622 0016077	**662** 0015106	**702** 0014245	**742** 0013477	**782** 0012788
623 0016051	**663** 0015083	**703** 0014225	**743** 0013459	**783** 0012771
624 0016026	**664** 0015060	**704** 0014205	**744** 0013441	**784** 0012755
625 0016000	**665** 0015038	**705** 0014184	**745** 0013423	**785** 0012739
626 0015974	**666** 0015015	**706** 0014164	**746** 0013405	**786** 0012723
627 0015949	**667** 0014993	**707** 0014144	**747** 0013387	**787** 0012706
628 0015924	**668** 0014970	**708** 0014124	**748** 0013369	**788** 0012690
629 0015898	**669** 0014948	**709** 0014104	**749** 0013351	**789** 0012674
630 0015873	**670** 0014925	**710** 0014085	**750** 0013333	**790** 0012658
631 0015848	**671** 0014903	**711** 0014065	**751** 0013316	**791** 0012642
632 0015823	**672** 0014881	**712** 0014045	**752** 0013298	**792** 0012626
633 0015798	**673** 0014859	**713** 0014025	**753** 0013280	**793** 0012610
634 0015773	**674** 0014837	**714** 0014006	**754** 0013263	**794** 0012594
635 0015748	**675** 0014815	**715** 0013986	**755** 0013245	**795** 0012579
636 0015723	**676** 0014793	**716** 0013966	**756** 0013228	**796** 0012563
637 0015699	**677** 0014771	**717** 0013947	**757** 0013210	**797** 0012547
638 0015674	**678** 0014749	**718** 0013928	**758** 0013193	**798** 0012531
639 0015649	**679** 0014728	**719** 0013908	**759** 0013175	**799** 0012516
640 0015625	**680** 0014706	**720** 0013889	**760** 0013158	**800** 0012500

801 0012484	**841** 0011891	**881** 0011351	**921** 0010858	**961** 0010406
802 0012469	**842** 0011876	**882** 0011338	**922** 0010846	**962** 0010395
803 0012453	**843** 0011862	**883** 0011325	**923** 0010834	**963** 0010384
804 0012438	**844** 0011848	**884** 0011312	**924** 0010823	**964** 0010373
805 0012422	**845** 0011834	**885** 0011299	**925** 0010811	**965** 0010363
806 0012407	**846** 0011820	**886** 0011287	**926** 0010799	**966** 0010352
807 0012392	**847** 0011806	**887** 0011274	**927** 0010787	**967** 0010341
808 0012376	**848** 0011792	**888** 0011261	**928** 0010776	**968** 0010331
809 0012361	**849** 0011779	**889** 0011249	**929** 0010764	**969** 0010320
810 0012346	**850** 0011765	**890** 0011236	**930** 0010753	**970** 0010309
811 0012330	**851** 0011751	**891** 0011223	**931** 0010741	**971** 0010299
812 0012315	**852** 0011737	**892** 0011211	**932** 0010730	**972** 0010288
813 0012300	**853** 0011723	**893** 0011198	**933** 0010718	**973** 0010277
814 0012285	**854** 0011710	**894** 0011186	**934** 0010707	**974** 0010267
815 0012270	**855** 0011696	**895** 0011173	**935** 0010695	**975** 0010256
816 0012255	**856** 0011682	**896** 0011161	**936** 0010684	**976** 0010246
817 0012240	**857** 0011669	**897** 0011148	**937** 0010672	**977** 0010235
818 0012225	**858** 0011655	**898** 0011136	**938** 0010661	**978** 0010225
819 0012210	**859** 0011641	**899** 0011123	**939** 0010650	**979** 0010215
820 0012195	**860** 0011628	**900** 0011111	**940** 0010638	**980** 0010204
821 0012180	**861** 0011614	**901** 0011099	**941** 0010627	**981** 0010194
822 0012165	**862** 0011601	**902** 0011086	**942** 0010616	**982** 0010183
823 0012151	**863** 0011587	**903** 0011074	**943** 0010604	**983** 0010173
824 0012136	**864** 0011574	**904** 0011062	**944** 0010593	**984** 0010163
825 0012121	**865** 0011561	**905** 0011050	**945** 0010582	**985** 0010152
826 0012107	**866** 0011547	**906** 0011038	**946** 0010571	**986** 0010142
827 0012092	**867** 0011534	**907** 0011025	**947** 0010560	**987** 0010132
828 0012077	**868** 0011521	**908** 0011013	**948** 0010549	**988** 0010121
829 0012063	**869** 0011507	**909** 0011001	**949** 0010537	**989** 0010111
830 0012048	**870** 0011494	**910** 0010989	**950** 0010526	**990** 0010101
831 0012034	**871** 0011481	**911** 0010977	**951** 0010515	**991** 0010091
832 0012019	**872** 0011468	**912** 0010965	**952** 0010504	**992** 0010081
833 0012005	**873** 0011455	**913** 0010953	**953** 0010493	**993** 0010070
834 0011990	**874** 0011442	**914** 0010941	**954** 0010482	**994** 0010060
835 0011976	**875** 0011429	**915** 0010929	**955** 0010471	**995** 0010050
836 0011962	**876** 0011416	**916** 0010917	**956** 0010460	**996** 0010040
837 0011947	**877** 0011403	**917** 0010905	**957** 0010449	**997** 0010030
838 0011933	**878** 0011390	**918** 0010893	**958** 0010438	**998** 0010020
839 0011919	**879** 0011377	**919** 0010881	**959** 0010428	**999** 0010010
840 0011905	**880** 0011364	**920** 0010870	**960** 0010417	**1000** 0010000

TABLE OF INTEREST FACTORS (360 DAY BASIS) - Interest from 1 to 10 %

%	DIVISORS				MULTIPLIERS			
	0	+ ¼ %	+ ½ %	+ ¾ %	0	+ ¼ %	+ ½ %	+ ¾ %
0	000,000.00	144,000.00	72,000.00	48,000.00	0.0000000000	0.0000069444	0.000013888	0.000020833
1	36,000.00	28,800.00	24,000.00	20,571.43	0.000027777	0.000034722	0.000041666	0.000048612
2	18,000.00	16,000.00	14,400.00	13,090.91	0.000055555	0.000062500	0.000069444	0.000076389
3	12,000.00	11,076.92	10,285.71	9,600.00	0.000083333	0.000090278	0.000097222	0.00010416
4	9,000.00	8,470.59	8,000.00	7,578.95	0.00011111	0.00011805	0.00012500	0.00013194
5	7,200.00	6,857.14	6,545.00	6,260.87	0.00013888	0.00014583	0.00015278	0.00015972
6	6,000.00	5,760.00	5,538.46	5,333.33	0.00016666	0.00017361	0.00018055	0.00018750
7	5,142.86	4,965.52	4,800.00	4,645.16	0.00019444	0.00020138	0.00020833	0.00021528
8	4,500.00	4,363.64	4,235.29	4,114.29	0.00022222	0.00022916	0.00023611	0.00024305
9	4,000.00	3,891.89	3,789.47	3,692.31	0.00025000	0.00025694	0.00026388	0.00027083
10	3,600.00	3,512.20	3,428.57	3,348.84	0.00027777	0.00028472	0.00029166	0.00029861

TABLE OF INTEREST FACTORS (365 DAY BASIS) - Interest from 1 to 10 %

%	DIVISORS				MULTIPLIERS			
	0	+ ¼ %	+ ½ %	+ ¾ %	0	+ ¼ %	+ ½ %	+ ¾ %
0	000,000.00	146,000.00	73,000.00	48,666.66	0.0000000000	0.0000068493	0.000013698	0.000020547
1	36,500.00	29,200.00	24,333.33	20,857.14	0.000027397	0.000034246	0.000041096	0.000047945
2	18,250.00	16,222.22	14,600.00	13,272.73	0.000054794	0.000061643	0.000068493	0.000075342
3	12,166.67	11,230.77	10,428.57	9,733.33	0.000082191	0.000089041	0.000095890	0.00010273
4	9,125.00	8,588.24	8,111.11	7,684.21	0.00010958	0.00011643	0.00012328	0.00013013
5	7,300.00	6,952.38	6,636.36	6,347.83	0.00013698	0.00014383	0.00015068	0.00015753
6	6,083.33	5,840.00	5,615.38	5,407.41	0.00016438	0.00017123	0.00017808	0.00018493
7	5,214.29	5,034.48	4,866.67	4,709.68	0.00019178	0.00019863	0.00020548	0.00021232
8	4,562.50	4,424.24	4,294.12	4,171.43	0.00021917	0.00022602	0.00023287	0.00023972
9	4,055.55	3,945.95	3,842.11	3,743.59	0.00024657	0.00025342	0.00026027	0.00026712
10	3,650.00	3,560.98	3,476.19	3,395.35	0.00027397	0.00028082	0.00028767	0.00029452

CONVERSION FACTORS

Linear measures

Multiply	By	To obtain	Multiply	By	To obtain
Millimetres (mm.)	0.03937	Inches (in.)	Inches	25.40	Millimetres
Centimetres (cm.)	0.3937	Inches	Feet	30.48	Centimetres
			Feet	0.3048	Metres
Metres (m.)	3.281	Feet (ft.)	Yards	0.9144	Metres
Metres (m.)	1.094	Yards (yd.)	Fathoms (6 ft.)	1.829	Metres
Metres (m.)	0.5468	Fathoms	Cables (200 yd.)	182.9	Metres
			Miles:		
Kilometres (km.)	0.6214	Miles (land)	land (1,760 yd.)	1.609	Kilometres
Kilometres (km.)	0.5396	Miles (sea)	sea (2,027 yd.)	1.853	Kilometres
Kilometres/hour	0.6214	Miles/hour	Miles/hour	1.609	Kilometres/hour
Kilometres/hour	0.5396	Knots (sea miles/hour)	Miles/hour	0.8684	Knots

Square measures

Sq. millimetres	0.00155	Sq. inches	Sq. inches	645.2	Sq. millimetres
Sq. centimetres	0.1550	Sq. inches	Sq. inches	6.452	Sq. centimetres
Sq. metres	10.76	Sq. feet	Sq. feet	929.0	Sq. centimetres
Sq. metres	1.196	Sq. yards	Sq. feet	0.09290	Sq. metres
Sq. kilometres	247.1	Acres	Acres	0.8361	Sq. metres
Sq. kilometres	0.3861	Sq. miles	Sq. yards	4.047	Sq. metres
Hectares (ha.)	2.471	Acres	Acres	0.004047	Sq. kilometres
			Acres	0.4047	Hectares
			Sq. miles	2.590	Sq. kilometres

Cubic measures

Cu. centimetres (cc.)	0.06102	Cu. inches	Pints (Imp.)	0.5683	Litres
Litres (lit.) 1,000 cc.	61.02	Cu. inches	Pints (US)	0.4732	Litres
Litres (lit.) 1,000 cc.	0.03532	Cu. feet	Gallons (Imp.)	4.546	Litres
Litres (lit.) 1,000 cc.	0.2642	Gallons (US)	Gallons (US)	3.785	Litres
Litres (lit.) 1,000 cc.	0.2200	Gallons (Imp.)	Cu. feet	28.32	Litres
Hectolitres (hl.)	26.42	Gallons (US)	Bushels (Imp.)	0.3637	Hectolitres
Hectolitres (hl.)	22.00	Gallons (Imp.)	Bushels (US)	0.3524	Hectolitres
Hectolitres (hl.)	2.838	Bushels (US)	Gallons (Imp.)	1.201	Gallons (US)
Hectolitres (hl.)	2.750	Bushels (Imp.)	Gallons (US)	0.8327	Gallons (Imp.)
Cu. metres (cu. m.)	35.31	Cu. feet	Barrels	34.47	Gallons (Imp.)
Cu. metres (cu. m.)	264.2	Gallons (US)	Barrels	42	Gallons (US)
Cu. metres (cu. m.)	220.0	Gallons (Imp.)	Barrels	0.1590	Cu. metres
Cu. metres (cu. m.)	6.290	Barrels (bbl.)			

Weights

Grams (gm.)	0.03527	Ounces (oz.) *	Ounces *	28.35	Grams
Grams (gm.)	0.03215	Ounces Troy	Ounces Troy	31.10	Grams
Kilograms (kg.)	2.205	Pounds (lb.) *	Pounds *	453.6	Grams
Metric quintals (q.)	220.5	Pounds (lb.) *	Pounds *	0.4536	Kilograms
Metric tons	2.250	Pounds *	Hundredweights (cwt.) (112 lb.)	0.05	Long tons
Metric tons	1.102	Short tons		0.5080	Metric quintals
Metric tons	0.9842	Long tons	Long tons (2,240 lb.)	1.12	Short tons
				1.016	Metric tons
		* Avoirdupois	Short tons (2,000 lb.)	0.9829	Long tons
				0.9072	Metric tons

CONVERSION TABLE OF SHILLINGS AND PENCE INTO DECIMALS OF A POUND

1 d. = £ 1/240 = £ 0.004166667

PENCE

Shs.	0	1	2	3	4	5	6	7	8	9	10	11
0	0.00000	0.00417	0.00833	0.01250	0.01667	0.02083	0.02500	0.02917	0.03333	0.03750	0.04167	0.04583
1	0.05000	0.05417	0.05833	0.06250	0.06667	0.07083	0.07500	0.07917	0.08333	0.08750	0.09167	0.09583
2	0.10000	0.10417	0.10833	0.11250	0.11667	0.12038	0.12500	0.12017	0.13333	0.13750	0.14167	0.14583
3	0.15000	0.15417	0.15833	0.16250	0.16667	0.17083	0.17500	0.17917	0.18333	0.18750	0.19167	0.19583
4	0.20000	0.20417	0.20833	0.21250	0.21667	0.22083	0.22500	0.22917	0.23333	0.23750	0.24167	0.24583
5	0.25000	0.25417	0.25833	0.26250	0.26667	0.27083	0.27500	0.27917	0.28333	0.28750	0.29167	0.29583
6	0.30000	0.30417	0.30833	0.31250	0.31667	0.32083	0.32500	0.32917	0.33333	0.33750	0.34167	0.34583
7	0.35000	0.35417	0.35833	0.36250	0.36667	0.37083	0.37500	0.37917	0.38333	0.38750	0.39167	0.39583
8	0.40000	0.40417	0.40833	0.41250	0.41667	0.42083	0.42500	0.42917	0.43333	0.43750	0.44167	0.44583
9	0.45000	0.45417	0.45833	0.46250	0.46667	0.47083	0.47500	0.47917	0.48333	0.48750	0.49167	0.49583
10	0.50000	0.50417	0.50833	0.51250	0.51667	0.52083	0.52500	0.52917	0.53333	0.53750	0.54167	0.54583
11	0.55000	0.55417	0.55833	0.56250	0.56667	0.57083	0.57500	0.57917	0.58333	0.58750	0.59167	0.59583
12	0.60000	0.60417	0.60833	0.61250	0.61667	0.62083	0.62500	0.62917	0.63333	0.63750	0.64167	0.64583
13	0.65000	0.65417	0.65833	0.66250	0.66667	0.67083	0.67500	0.67917	0.68333	0.68750	0.69167	0.69583
14	0.70000	0.70417	0.70833	0.71250	0.71667	0.72083	0.72500	0.72917	0.73333	0.73750	0.74167	0.74583
15	0.75000	0.75417	0.75833	0.76250	0.76667	0.77083	0.77500	0.77917	0.78333	0.78750	0.79167	0.79583
16	0.80000	0.80417	0.80833	0.81250	0.81667	0.82083	0.82500	0.82917	0.83333	0.83750	0.84167	0.84583
17	0.85000	0.85417	0.85833	0.86250	0.86667	0.87083	0.87500	0.87917	0.88333	0.88750	0.89167	0.89583
18	0.90000	0.90417	0.90833	0.91250	0.91667	0.92083	0.92500	0.92917	0.93333	0.93750	0.94167	0.94583
19	0.95000	0.95417	0.95833	0.96250	0.96667	0.97083	0.97500	0.97917	0.98333	0.98750	0.99167	0.99583

CONVERSION TABLE OF DECIMALS OF A POUND INTO SHILLINGS AND PENCE

£ 1 = 20 s. = 240 d.

(First and second decimal figures of a pound)

SECOND DECIMAL FIGURE

£	0		1		2		3		4	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
0.0	0	0	0	2.4	0	4.8	0	7.2	0	9.6
0.1	2	0	2	2.4	2	4.8	2	7.2	2	9.6
0.2	4	0	4	2.4	4	4.8	4	7.2	4	9.6
0.3	6	0	6	2.4	6	4.8	6	7.2	6	9.6
0.4	8	0	8	2.4	8	4.8	8	7.2	8	9.6
0.5	10	0	10	2.4	10	4.8	10	7.2	10	9.6
0.6	12	0	12	2.4	12	4.8	12	7.2	12	9.6
0.7	14	0	14	2.4	14	4.8	14	7.2	14	9.6
0.8	16	0	16	2.4	16	4.8	16	7.2	16	9.6
0.9	18	0	18	2.4	18	4.8	18	7.2	18	9.6

£	5		6		7		8		9	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
0.0	1	0	1	2.4	1	4.8	1	7.2	1	9.6
0.1	3	0	3	2.4	3	4.8	3	7.2	3	9.6
0.2	5	0	5	2.4	5	4.8	5	7.2	5	9.6
0.3	7	0	7	2.4	7	4.8	7	7.2	7	9.6
0.4	9	0	9	2.4	9	4.8	9	7.2	9	9.6
0.5	11	0	11	2.4	11	4.8	11	7.2	11	9.6
0.6	13	0	13	2.4	13	4.8	13	7.2	13	9.6
0.7	15	0	15	2.4	15	4.8	15	7.2	15	9.6
0.8	17	0	17	2.4	17	4.8	17	7.2	17	9.6
0.9	19	0	19	2.4	19	4.8	19	7.2	19	9.6

CONVERSION TABLE OF DECIMALS OF A POUND INTO SHILLINGS AND PENCE

(Third and fourth decimal figures of a pound)

FOURTH DECIMAL FIGURE

£	0		1		2		3		4	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
0.000	0	0.000	0	0.024	0	0.048	0	0.072	0	0.096
0.001	0	0.240	0	0.264	0	0.288	0	0.312	0	0.336
0.002	0	0.480	0	0.504	0	0.528	0	0.552	0	0.576
0.003	0	0.720	0	0.744	0	0.768	0	0.792	0	0.816
0.004	0	0.960	0	0.984	0	1.008	0	1.032	0	1.056
0.005	0	1.200	0	1.224	0	1.248	0	1.272	0	1.296
0.006	0	1.440	0	1.464	0	1.488	0	1.512	0	1.536
0.007	0	1.680	0	1.704	0	1.728	0	1.752	0	1.776
0.008	0	1.920	0	1.944	0	1.968	0	1.992	0	2.016
0.009	0	2.160	0	2.184	0	2.208	0	2.232	0	2.256

£	5		6		7		8		9	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
0.000	0	0.120	0	0.144	0	0.168	0	0.192	0	0.216
0.001	0	0.360	0	0.384	0	0.408	0	0.432	0	0.456
0.002	0	0.600	0	0.624	0	0.648	0	0.672	0	0.696
0.003	0	0.840	0	0.864	0	0.888	0	0.912	0	0.936
0.004	0	1.080	0	1.104	0	1.128	0	1.152	0	1.176
0.005	0	1.320	0	1.344	0	1.368	0	1.392	0	1.416
0.006	0	1.560	0	1.584	0	1.608	0	1.632	0	1.656
0.007	0	1.800	0	1.824	0	1.848	0	1.872	0	1.896
0.008	0	2.040	0	2.064	0	2.088	0	2.112	0	2.136
0.009	0	2.280	0	2.304	0	2.328	0	2.352	0	2.376

TABLE OF DAYS EXPRESSED AS THE DECIMAL EQUIVALENT OF THE YEAR

(365 days)

January		February		March		April		May		June	
1	.00274	32	.08767	60	.16438	91	.24932	121	.33151	152	.41644
2	.00548	33	.09041	61	.16712	92	.25205	122	.33425	153	.41918
3	.00822	34	.09315	62	.16986	93	.25479	123	.33699	154	.42192
4	.01096	35	.09589	63	.17260	94	.25753	124	.33973	155	.42466
5	.01370	36	.09863	64	.17534	95	.26027	125	.34247	156	.42740
6	.01644	37	.10137	65	.17808	96	.26301	126	.34521	157	.43014
7	.01918	38	.10411	66	.18082	97	.26575	127	.34795	158	.43288
8	.02192	39	.10685	67	.18356	98	.26849	128	.35068	159	.43562
9	.02466	40	.10959	68	.18630	99	.27123	129	.35342	160	.43836
10	.02740	41	.11233	69	.18904	100	.27397	130	.35616	161	.44110
11	.03014	42	.11507	70	.19178	101	.27671	131	.35890	162	.44384
12	.03288	43	.11781	71	.19452	102	.27945	132	.36164	163	.44658
13	.03562	44	.12055	72	.19726	103	.28219	133	.36438	164	.44932
14	.03836	45	.12329	73	.20000	104	.28493	134	.36712	165	.45205
15	.04110	46	.12603	74	.20274	105	.28767	135	.36986	166	.45479
16	.04384	47	.12877	75	.20548	106	.29041	136	.37260	167	.45753
17	.04658	48	.13151	76	.20822	107	.29315	137	.37534	168	.46027
18	.04932	49	.13425	77	.21096	108	.29589	138	.37808	169	.46301
19	.05205	50	.13699	78	.21370	109	.29863	139	.38082	170	.46575
20	.05479	51	.13973	79	.21644	110	.30137	140	.38356	171	.46849
21	.05753	52	.14247	80	.21918	111	.30411	141	.38630	172	.47123
22	.06027	53	.14521	81	.22192	112	.30685	142	.38904	173	.47397
23	.06301	54	.14795	82	.22466	113	.30959	143	.39178	174	.47671
24	.06575	55	.15068	83	.22740	114	.31233	144	.39452	175	.47945
25	.06849	56	.15342	84	.23014	115	.31507	145	.39726	176	.48219
26	.07123	57	.15616	85	.23288	116	.31781	146	.40000	177	.48493
27	.07397	58	.15890	86	.23562	117	.32055	147	.40274	178	.48767
28	.07671	59	.16164	87	.23836	118	.32329	148	.40548	179	.49041
29	.07945	60	.16438	88	.24110	119	.32603	149	.40822	180	.49315
30	.08219			89	.24384	120	.32877	150	.41096	181	.49589
31	.08493			90	.24658			151	.41370		

TABLE OF DAYS EXPRESSED AS THE DECIMAL EQUIVALENT OF THE YEAR

(365 days)

July		August		September		October		November		December		
182	.49863	213	.58356	244	.66849	274	.75068	305	.83562	335	.91781	1
183	.50137	214	.58630	245	.67123	275	.75342	306	.83836	336	.92055	2
184	.50411	215	.58904	246	.67397	276	.75616	307	.84110	337	.92329	3
185	.50685	216	.59178	247	.67671	277	.75890	308	.84384	338	.92603	4
186	.50959	217	.59452	248	.67945	278	.76164	309	.84658	339	.92877	5
187	.51233	218	.59726	249	.68219	279	.76438	310	.84932	340	.93151	6
188	.51507	219	.60000	250	.68493	280	.76712	311	.85205	341	.93425	7
189	.51781	220	.60274	251	.68767	281	.76986	312	.85479	342	.93699	8
190	.52055	221	.60548	252	.69041	282	.77260	313	.85753	343	.93973	9
191	.52329	222	.60822	253	.69315	283	.77534	314	.86027	344	.94247	10
192	.52603	223	.61096	254	.69589	284	.77808	315	.86301	345	.94521	11
193	.52877	224	.61370	255	.69863	285	.78082	316	.86575	346	.94795	12
194	.53151	225	.61644	256	.70137	286	.78356	317	.86849	347	.95068	13
195	.53425	226	.61918	257	.70411	287	.78630	318	.87123	348	.95342	14
196	.53699	227	.62192	258	.70685	288	.78904	319	.87397	349	.95616	15
197	.53973	228	.62466	259	.70959	289	.79178	320	.87671	350	.95890	16
198	.54247	229	.62740	260	.71233	290	.79452	321	.87945	351	.96164	17
199	.54521	230	.63014	261	.71507	291	.79726	322	.88219	352	.96438	18
200	.54795	231	.63288	262	.71781	292	.80000	323	.88493	353	.96712	19
201	.55068	232	.63562	263	.72055	293	.80274	324	.88767	354	.96986	20
202	.55342	233	.63836	264	.72329	294	.80548	325	.89041	355	.97260	21
203	.55616	234	.64110	265	.72603	295	.80822	326	.89315	356	.97534	22
204	.55890	235	.64384	266	.72877	296	.81096	327	.89589	357	.97808	23
205	.56164	236	.64658	267	.73151	297	.81370	328	.89863	358	.98082	24
206	.56438	237	.64932	268	.73425	298	.81644	329	.90137	359	.98356	25
207	.56712	238	.65205	269	.73699	299	.81918	330	.90411	360	.98630	26
208	.56986	239	.65479	270	.73973	300	.82192	331	.90685	361	.98904	27
209	.57260	240	.65753	271	.74247	301	.82466	332	.90959	362	.99178	28
210	.57534	241	.66027	272	.74521	302	.82740	333	.91233	363	.99452	29
211	.57808	242	.66301	273	.74795	303	.83014	334	.91507	364	.99726	30
212	.58082	243	.66575			304	.83288			365	1.00000	31

TABLE FOR THE CONVERSION OF DOZENS AND UNITS INTO DECIMALS OF 1 GROSS

1 gross = 12 dozen = 144 units

Doz.	Units	Gross	Doz.	Units	Gross	Doz.	Units	Gross	Doz.	Units	Gross
—	1	.00694	1	37	.25694	1	73	.50694	1	109	.75694
—	2	.01389	2	38	.26389	2	74	.51389	2	110	.76389
—	3	.02083	3	39	.27083	3	75	.52083	3	111	.77083
—	4	.02778	4	40	.27778	4	76	.52778	4	112	.77778
—	5	.03472	5	41	.28472	5	77	.53472	5	113	.78472
—	6	.04167	6	42	.29167	6	78	.54167	6	114	.79167
—	7	.04861	7	43	.29861	7	79	.54861	7	115	.79861
—	8	.05556	8	44	.30556	8	80	.55556	8	116	.80556
—	9	.06250	9	45	.31250	9	81	.56250	9	117	.81250
—	10	.06944	10	46	.31944	10	82	.56944	10	118	.81944
—	11	.07639	11	47	.32639	11	83	.57639	11	119	.82639
[1]	12	.08333	[4]	48	.33333	[7]	84	.58333	[10]	120	.83333
1	13	.09028	1	49	.34028	1	85	.59028	1	121	.84028
2	14	.09722	2	50	.34722	2	86	.59722	2	122	.84722
3	15	.10417	3	51	.35417	3	87	.60417	3	123	.85417
4	16	.11111	4	52	.36111	4	88	.61111	4	124	.86111
5	17	.11806	5	53	.36806	5	89	.61806	5	125	.86806
6	18	.12500	6	54	.37500	6	90	.62500	6	126	.87500
7	19	.13194	7	55	.38194	7	91	.63194	7	127	.88194
8	20	.13889	8	56	.38889	8	92	.63889	8	128	.88889
9	21	.14583	9	57	.39583	9	93	.64583	9	129	.89583
10	22	.15278	10	58	.40278	10	94	.65278	10	130	.90278
11	23	.15972	11	59	.40972	11	95	.65972	11	131	.90972
[2]	24	.16667	[5]	60	.41667	[8]	96	.66667	[11]	132	.91667
1	25	.17361	1	61	.42361	1	97	.67361	1	133	.92361
2	26	.18056	2	62	.43056	2	98	.68056	2	134	.93056
3	27	.18750	3	63	.43750	3	99	.68750	3	135	.93750
4	28	.19444	4	64	.44444	4	100	.69444	4	136	.94444
5	29	.20139	5	65	.45139	5	101	.70139	5	137	.95139
6	30	.20833	6	66	.45833	6	102	.70833	6	138	.95833
7	31	.21528	7	67	.46528	7	103	.71528	7	139	.96528
8	32	.22222	8	68	.47222	8	104	.72222	8	140	.97222
9	33	.22917	9	69	.47917	9	105	.72917	9	141	.97917
10	34	.23611	10	70	.48611	10	106	.73611	10	142	.98611
11	35	.24306	11	71	.49306	11	107	.74306	11	143	.99306
[3]	36	.25000	[6]	72	.50000	[9]	108	.75000	[12]	144	1.00000

TABLE FOR NUMBER OF DAYS BETWEEN TWO DATES

Example of use: To find what percentage of 3 years is the number of days between 24th April, 1964 and 19th November, 1964 read the figures opposite April (4) and below November (11). This is 214 and that is the number of days between any given date in April and the same date in November. From the 19th to the 24th is 5 days, and as the second date is the earlier in the month subtract 5 from 214. This gives 209 days expired. If the last day of February in a leap-year is included, add one to the result. Below the table we find that one day is 0.000913 of three years. Enter .0913 on keyboard and multiply by 209.

From / A	(1) Jan.	(2) Feb.	(3) Mar.	(4) April	(5) May	(6) June	(7) July	(8) Aug.	(9) Sept.	(10) Oct.	(11) Nov.	(12) Dec.
(1) January	**365**	31	59	90	120	151	181	212	243	273	304	334
(2) February	334	**365**	28	59	89	120	150	181	212	242	273	303
(3) March	306	337	**365**	31	61	92	122	153	184	214	245	275
(4) April	275	306	334	**365**	30	61	91	122	153	183	214	244
(5) May	245	276	304	335	**365**	31	61	92	123	153	184	214
(6) June	214	245	273	304	334	**365**	30	61	92	122	153	183
(7) July	184	215	243	274	304	335	**365**	31	62	92	123	153
(8) August	153	184	212	243	273	304	334	**365**	31	61	92	122
(9) September	122	153	181	212	242	273	303	334	**365**	30	61	91
(10) October	92	123	151	182	212	243	273	304	335	**365**	31	61
(11) November	61	92	120	151	181	212	242	273	304	334	**365**	30
(12) December	31	62	90	121	151	182	212	243	274	304	335	**365**

Decimal Equivalent of One Day in

1 Year - .002740
2 Years - .001370
3 Years - .000913
4 Years - .000685
5 Years - .000584

TABLE OF DECIMAL EQUIVALENTS OF COMMON FRACTIONS

		1/3	1/4	1/5	1/6	1/7	1/8	1/9	1/11	1/12	1/13
1		.3333	.25	.2	.1667	.1429	.125	.1111	.0909	.0833	.0769
2		.6667	.5	.4	.3333	.2857	.25	.2222	.1818	.1667	.1538
3			.75	.6	.5	.4286	.375	.3333	.2727	.25	.2308
4				.8	.6667	.5714	.5	.4444	.3636	.3333	.3077
5					.8333	.7143	.625	.5556	.4545	.4167	.3846
6						.8571	.75	.6667	.5455	.5	.4615
7							.875	.7778	.6364	.5833	.5385
8								.8889	.7273	.6667	.6154
9									.8182	.75	.6923
10									.9091	.8333	.7692
11										.9167	.8462
12											.9231

	1/14	1/15	1/16	1/17	1/18	1/19	1/20	1/21	1/22	1/23	1/24
1	.0714	.0667	.0625	.0588	.0555	.0526	.05	.0476	.0454	.0435	.0417
2	.1429	.1333	.125	.1176	.1111	.1053	.10	.0952	.0909	.0869	.0833
3	.2143	.2	.1875	.1765	1666	.1579	.15	.1428	.1363	.1304	.1250
4	.2857	.2667	.25	.2353	.2222	.2105	.20	.1905	.1818	.1739	.1666
5	.3571	.3333	.3125	.2941	.2777	.2631	.25	.2381	.2273	.2174	.2083
6	.4286	.4	.375	.3529	.3333	.3157	.30	.2857	.2727	.2608	.25
7	.5	.4667	.4375	.4117	.3889	.3684	.35	.3333	.3182	.3043	.2916
8	.5714	.5333	.5	.4706	.4444	.4210	.40	.3809	.3636	.3478	.3333
9	.6429	.6	.5625	.5294	.50	.4737	.45	.4286	.4091	.3913	.3750
10	.7143	.6667	.625	.5882	.5555	.5263	.50	.4762	.4545	.4348	.4166
11	.7857	.7333	.6875	.6470	.6111	.5789	.55	.5238	.50	.4782	.4583
12	.8571	.8	.75	.7059	.6666	.6316	.60	.5714	.5454	.5217	.50
13	.9286	.8667	.8125	.7647	.7222	.6842	.65	.6190	.5909	.5652	.5416
14		.9333	.875	.8235	.7777	.7368	.70	.6666	.6363	.6087	.5833
15			.9375	.8823	.8333	.7894	.75	.7143	.6818	.6522	.6250
16				.9412	.8888	.8421	.80	.7619	.7273	.6956	.6666
17					.9444	.8947	.85	.8095	.7727	.7391	.7083
18						.9473	.90	.8571	.8181	.7826	.7500
19							.95	.9047	.8636	.8261	.7916
20								.9524	.9091	.8695	.8333
21									.9545	.9130	.8750
22										.9565	.9166
23											.9583

olivetti
Divisumma 24